Mechanisation invades the cotton-fields of Soviet Asia. A tractor at work sowing cotton at the "Bolshevik" Collective Farm, Tadzhikistan. The driver, Brigade-Leader D. Artykov.

SOVIETS IN CENTRAL ASIA

BY

W. P. AND ZELDA K. COATES

LONDON
LAWRENCE & WISHART LTD
1951

PRINTED IN GREAT BRITAIN BY
RICHARD CLAY AND COMPANY, LTD.,
BUNGAY, SUFFOLK.

" We want a voluntary union of nations—a union which would permit of no oppression of one nation by another—such a union as would be based on the most complete confidence, on a clear understanding of fraternal unity, on entirely voluntary consent."

Lenin.

FOREWORD

THIS book is the outcome of an extremely interesting journey made by the authors recently in the Central Asian Republics of the U.S.S.R.

The first part deals with the ancient history of the peoples of Central Asia, the conquest of these lands by the Tsarist Government and their liberation in November 1917.

The second part gives a description of life in the Soviet Central Asian Republics and shows what the Soviet national policy has accomplished.

In view of the awakening of the peoples of the East, particularly in Asia, and indeed of all colonial peoples, the question of how to deal with these more backward nationalities is of the utmost importance not only to the colonial peoples themselves, but also to us Europeans.

Whatever may be thought of the Soviet system, whether one likes or dislikes it, no one can deny that the Soviet national policy—a policy well thought out by Lenin and Stalin and their colleagues long before the revolution—has been an outstanding success. The U.S.S.R. has made an important contribution to the study, theory and practice of this important question. The lessons to be derived from the Soviet experience may be of invaluable help to the rest of the world in dealing with national minorities, and it is the hope of the authors that this book will be of some service in spreading information of what has been done in the Central Asian Soviet Socialist Republics and in pointing to the lessons to be learnt therefrom.

We would add that we give the figures of the Post-War Five Year Plan (due to be completed on December 31, 1950) for each of the Central Asian Republics. As this book is going to press before the end of 1950, the complete results have not yet been published. But all the indications are that the Plans, in the main, will be fulfilled and in the case of some enterprises even over-fulfilled.

ACKNOWLEDGEMENTS

We gratefully acknowledge the permission of Faber & Faber Ltd., London, to quote from *Alone Through the Forbidden Land* by Gustav Krist; of Methuen & Co. Ltd., London, to quote from *The Land of Timur* by A. Polovtsoff; and of Colonel P. T. Etherton to quote from *In the Heart of Asia*. We are grateful to the *Soviet Weekly* for permission to reproduce photographs.

CONTENTS

		PAGE
	EXPLANATION OF TERMS	x
	LIST OF ILLUSTRATIONS	xi
	PART I	
	HISTORICAL	
CHAP.		
I.	INTRODUCTION	15
II.	THE EVOLUTION OF THE CENTRAL ASIAN STATES	26
III.	THE RUSSIAN CONQUEST OF THE CENTRAL ASIAN KHANATES	42
IV.	HOW THE TSARIST GOVERNMENT RULED THE CENTRAL ASIAN PROVINCES	52
V.	AFTER THE MARCH AND NOVEMBER (1917) REVOLUTIONS	67
	PART II	
	THE SOVIET CENTRAL ASIAN REPUBLICS TODAY	
VI.	CENTRAL ASIA UNDER THE SOVIETS	97
VII.	THE KAZAKH SOVIET SOCIALIST REPUBLIC (KAZAKHSTAN)	116
VIII.	THE KIRGHIZ SOVIET SOCIALIST REPUBLIC (KIRGHIZIA)	149
IX.	THE TADZHIK SOVIET SOCIALIST REPUBLIC (TADZHIKISTAN)	171
X.	THE TURKMENIAN SOVIET SOCIALIST REPUBLIC (TURKMENISTAN)	204
XI.	THE UZBEK SOVIET SOCIALIST REPUBLIC (UZBEKISTAN)	226
XII.	CONCLUSION	274
	INDEX	284

EXPLANATION OF TERMS

CENTNER (the Russian Centner is what is generally known as a double centner)	= 220·46 lb.
CUBIC METRE	= 35·315 cubic feet.
KILOGRAM	= 2·2046 lb.
KILOMETRE	= 0·621 mile.
METRE	= 39·37 inches.
HECTARE	= 2·471 acres.
SQUARE METRE	= 10·76 square feet.
SQUARE KILOMETRE	= 0·39 square miles.
KOLKHOZ	Collective Farm.
KOLKHOZY	Collective Farms.
SOVKHOZ	Soviet State Farm.
SOVKHOZY	Soviet State Farms.

LIST OF ILLUSTRATIONS

PLATES

Mechanisation invades the cotton-fields of Soviet Asia *frontispiece*

An Uzbek girl research worker at an industrial laboratory in Tashkent *facing page* 64

Travelling libraries satisfy the growing demand for books 65

Collective farmers v. " Spartak ". A match at a village football ground 65

The old crafts are kept alive in the co-operatives 80

Great irrigation projects are transforming the plains 81

Valuable mineral deposits are worked in the mountains 81

Children grow up healthy and happy 112

An electric tractor at work on the cotton-fields in Uzbekistan 113

A typical Kazakh collective farm woman 128

A new Soviet giant at work—the mechanised cotton picker 128

Kazakhstan's national bard, Dzhambul 129

English is taught in Tashkent schools. The authors are present at an English lesson 129

Breakfast served on the terrace at a Children's Sanatorium in Kirghizia 160

Modern-looking villages are being built 161

Kirghiz horsewomen participate in a collective farm festival 161

A Tadzhik coal-miner 176

Brigade-Leader Zhurayev makes his rounds on a motor-cycle 176

The brothers Dodobaev and their wives of the " Stalin " Collective Farm 177

A fine herd of goats in Tadzhikistan 177

Water-distributing centre of the " Bolshevik " Collective Farm in Turkmenia 208 208

Kazakh herdsman Bairev and Olga Muksreva, student from Moscow, inspect two karakul lambs 209

Newspaper-reading time for Turkmenian shepherds 209

The Shir-Dar madrasah 224

A street in modern Tashkent 224

A members' meeting at the " Azad " Collective Farm in Uzbekistan 225

MAP

Soviet Central Asia *fold-in map facing* 288

PART I

HISTORICAL

CHAPTER I

INTRODUCTION

THE U.S.S.R. covers an immense area—in all, one-sixth of the world's surface. Many visitors have been to European Russia, a smaller number have visited the new and the old industrial towns in the Urals and in western Siberia, but relatively few have travelled to the Central Asiatic Republics of the Soviet Union. This is due partly to distance and partly to the fact that rail communications between these Republics and Moscow are roundabout, and consequently slow. Now, however, there is a good passenger air service between Moscow and these little-known Republics.

Prior to the Tsarist conquest this part of Central Asia was very difficult of access to Europeans, and many of the few travellers never returned. Gustav Krist (who returned from Turkestan in 1922) in his *Alone Through the Forbidden Land*, stated:

> " Such Europeans as had visited Bukhara before the end of the nineteenth century were for the most part agents of the British, French and Russian Governments, who travelled either in disguise or under the pretext of scientific research. They seldom returned. They were usually discovered and executed, or compelled to serve as slaves. The few among them who got back to Europe confided little concerning their adventures or experiences to the public, since as military emissaries it was their business to furnish reports only to their respective Governments."

Yes, penetrating into these areas was then a risky business. The author continued:

> " During the eighteenth and nineteenth centuries a number of Russian spies were successful in penetrating the country, and a handful of Western Europeans, among whom were Vambéry, Schwarz, Lansdell and Chanikoff; finally the two Englishmen, Stoddart and Conolly, were executed in Bukhara in 1842. These were of course not the only travellers who attempted the journey, but most of the others failed to reach their goal, for the rivals

> Britain and Russia would inform the Amirs in time of the plucky adventurers' intentions, and they were either detected and turned back at the frontiers, or taken prisoners to the capital, whence they were repatriated, after lengthy negotiations, in return for a heavy ransom . . . without having been allowed to see anything of Bukhara itself. It is characteristic of the country and its Government that less than fifty years ago Russia had to redeem a number of her citizens out of Bukharan slavery." [1]

And even after the Tsarist conquest conditions were not very much easier:

> "In the early twentieth century a few men, Russians and British for the most part, succeeded in gaining entry to the country and endeavoured mutually to supplant each other in the favour of the Amir; for the Governments of both countries looked on Bukhara as the heart of the Muslim world—which in fact it is today—and were seeking there a base for the penetration and conquest of Central Asia. For the moment the Russians have won the round." [2]

With further reference to the unfortunate Britishers, Stoddart and Conolly, Lieut.-Colonel P. T. Etherton wrote in his *In the Heart of Asia*:

> "Conolly and Stoddart were sent to Bukhara in 1840, where they were treacherously seized and thrown into the dungeons by the Emir. There they remained on and off until the disaster to our arms in Afghanistan in 1842 sealed their fate, and they were taken out and beheaded, after refusing to embrace Islam as the price of their release. No retribution was ever exacted by us for this foul crime."

Even the British Empire, then the most mighty in the world, was powerless to penetrate effectively into these regions. What applied to Bukhara also applied more or less to the other Khanates of Central Asia at that time.

If one looks at a pre-1914 map of Tsarist Russia one sees an immense area—stretching from the lower Volga and the eastern shores of the Caspian Sea to the frontiers of western China, and from southern Siberia to the frontiers of Iran and Afghanistan—designated as Turke-

[1] *Alone Through the Forbidden Land.*
[2] Ibid.

stan. Sometimes it was referred to as "western Turkestan" or Russian Turkestan, to distinguish it from "eastern" or Chinese Turkestan.

All this area was ruled by Imperialist Russia, but within it there were two semi-independent Khanates (Moslem principalities), i.e. Bukhara and Khiva. At that time the Central Government at St. Petersburg divided the area for administrative purposes into two "Governments-General", viz., Turkestan (which included Transcaspia, Samarkand, Semiretchensk, Syr-Darya and Ferghana) and the Steppe provinces (which included Akmolinsk and Semipalatinsk).

These two "Governments-General", together with the two semi-independent Khanates, constitute the territory of the present-day five Central Asian Republics of the U.S.S.R., viz., Kazakhstan (capital Alma-Ata); Uzbekistan (capital Tashkent); Tadzhikistan (capital Stalinabad); Kirghizia (capital Frunze); Turkmenistan (capital Ashkhabad).

Roughly speaking, the southern part of the territory, formerly known as Russian Turkestan, constituting rather less than one-half of the total area, came under Russian domination between the years 1841 and 1884. One area after another was subdued by the Tsarist forces: Turgai, 1841; Kazablinsk, 1846; Aralsk, 1848; Kozata, 1849; Turkestan, 1865; Bukhara, 1868; Khiva, 1873; Ferghana, 1876; Geok-Tepe, 1881, and Merv, 1884. We deal with this subject in greater detail in subsequent chapters.

In passing, we may observe that the Crimean War (1854–56), one of the aims of which was to maintain a bloc of States between India and Russia, did not stay Russia's march towards the frontiers of India. As a matter of fact, within a generation after the conclusion of that conflict Russian frontier guards stood within ten miles of the frontiers of India.

The British Government of that period, not for the first time, was apparently very badly informed of the strength of Russia. Thus in 1864, a few weeks before the capture of Tashkent by Russian forces, a Hungarian, Arminius Vambéry, who had travelled extensively in Central Asia, visited London and had an interview with Lord Palmerston. Vambéry afterwards wrote:

> "It was during the very year I arrived in London that the news of the capture of Tashkent had reached Europe. A few weeks before that I happened to meet Lord Palmerston, and I

consider it no small distinction to have been listened to with attention by this greatest English statesman of modern times. After having given to him the outlines of my stirring adventures, and related all that I had heard of the approach of Russia, adding, at the same time, remarks upon the comparative ease with which the Muscovite would advance towards the Oxus, the noble Lord said, amongst other things, that we Hungarians, like the Poles, had a hot brain, and that many generations must pass before Russia would be able to pull down the Tartar barrier and approach the country intervening between India and Bukhara.

"I very much doubt whether the great English statesman seriously meant what he stated, for his careful inquiries into sundry details belied his seeming indifference." [1]

Further, we may add here that, also in order to keep Russia as far as possible from the frontiers of India and to prevent Russia establishing a Legation at Kabul, Great Britain fought two wars against Afghanistan (1839 and 1878), but Russia never made any serious attempt to invade the sub-Continent. In actual fact the Tsarist forces in the first World War and the Soviet forces in the second World War prevented a German invasion of India. "The Russian menace to India" was, indeed, largely a bogy, originated in St. Petersburg and enlarged upon in London and Delhi, with which British statesmen frightened themselves and their countrymen, to their own great cost.

It was axiomatic that the relations between Great Britain and Russia, be they friendly or hostile, were immediately reflected in the diplomatic activities of both Governments in Kabul. This is quite understandable, because, on the one hand, the Indian frontier tribes—a constant source of uneasiness to the Government of India—could be armed from Afghanistan; on the other hand, that country could be used as a jumping-off ground for an attack on Russia.

Under the terms of the Anglo-Russian Agreement of August 31, 1907, the Tsarist Government recognised British suzerainty in Afghanistan, and this treaty continued in force until the November Revolution (1917). On February 28, 1921, the Soviet Government signed an agreement with Afghanistan recognising the latter as a sovereign State. The British Foreign Office was so annoyed that, despite its long training in the practice of dissimulation, it gave open vent to its chagrin. In a Note to Moscow, dated March 16, 1921, it declared that "the

[1] *The Coming Struggle for India.*

Imperial Russian Government recognised that Afghanistan lay outside its sphere of influence ".

The treaty of February 1921 naturally enhanced enormously the prestige of the Soviet Government in Kabul, and, much against its wishes, the British Government was compelled to follow suit. On November 22, 1921, an Anglo-Afghan Treaty was signed, in which the complete independence of Afghanistan was recognised. From that date onwards, in the opinion of the Soviet Government, British diplomacy has striven incessantly to effect an estrangement between Kabul and Moscow. That this view had solid foundation is illustrated by the attitude of the British Government and Press during King Amanullah's visit to Great Britain in March 1928; the British authorities took every conceivable step to impress him with the power of Britain's naval and military forces, and no secret was made as to the moral which the Government hoped the Ruler of Afghanistan would draw.

Thus:

" Circumstances have arisen which may lead King Amanullah to abandon his proposed visit to Russia.

" It has been erroneously stated that the British Government do not desire that the King of Afghanistan should visit Russia. When his visit was first mooted it was regretted, but latterly opinion has veered round to regret at the possibility of the visit not taking place. The King and Queen of Afghanistan could not receive a welcome in Moscow approaching in any way that accorded them in London, and the King, with his quick intelligence, would appreciate the difference between British rule and the present form of Russian Government."[1]

" I am now in a position to state that, whatever doubts have been entertained on the subject in recent weeks, King Amanullah has definitely decided to return to Kabul by the overland route, as originally planned. This route will be via Warsaw and the Baltic Capitals to Moscow, Angora, Teheran, Meshed and Herat.

" Some of the later stretches of this lengthy journey, which will have to be covered by road, may be somewhat trying to the royal travellers, but his Afghan Majesty is naturally anxious to show courtesy to his Russian and Persian neighbours, as well as to Turkey, a Moslem sister-State.

[1] *Daily Express* Diplomatic Correspondent, 16.3.1928.

"These reasons are perfectly understood in British official circles. Indeed, the suggestion that the latter would view King Amanullah's visit to Moscow with any but feelings of perfect equanimity and serenity is wholly unwarranted. Great Britain has nothing to fear from a comparison between her conditions and those of Soviet Russia." [1]

Considerable attention was devoted by the British Press, Liberal as well as Tory, to King Amanullah's reception and stay in Russia. Thus, to quote a few of the headlines:

"Regal Show for Amanullah.
"National Anthem by Terrorist Band."
Daily News, May 4, 1928.

"King Amanullah and Moscow.
"Anti-British Ceremony Postponed."
The Times, May 7, 1928.

"King Amanullah.
"Stay in Russia to be Cut Short."
Daily Telegraph, May 8, 1928.

"Afghan King.
"Disillusioned by Visit to Russia."
Daily Mail, May 12, 1928.

We do not think it is open to doubt that the Press, taken as a whole, reflected the hopes and fears of the British Government, and that the aim of the latter was to convince the Afghan King that although the Soviet–Afghan Treaty of February 1921 led to the international recognition of Afghanistan as a sovereign State, yet the military and naval might of the British Empire was greater than that of Soviet Russia.

In the last decades of the 19th century and the early decades of the 20th the Russian provinces on the Afghan frontier were regarded as the Achilles heel of Russia, and certainly in pre-revolutionary days the native population was not loyal to the Tsarist regime. Whatever substance there was in the conception of the Achilles heel in the past, there is none today, for a variety of reasons. Here we wish to mention only one: the Soviet Republics of Central Asia are intensely loyal to the Soviet Power, and their forces are equipped with the most modern weapons.

[1] *Daily Telegraph* Diplomatic Correspondent, 29.3.1928.

The total area of the five Republics is immense—1,508,102 square miles. This is more than three times the combined areas of Great Britain, France and Germany, and equal to more than half the metropolitan area of the U.S.A.

These Republics lie roughly between the northern latitudes of 36 and 54 degrees. For purposes of comparison: western Europe, from the extreme south of Spain to the extreme north of Scotland, lies between 35 and 60 degrees north latitude; and the U.S.A. between (approximately) 25 and 49 degrees north latitude.

However, latitudinal position can be very misleading unless one takes into account the distance of the given areas from the warm waters of the Atlantic and Pacific Oceans.

The *Encyclopædia Britannica* (1911 Edition) states:

> "The climate of West Turkestan is exceedingly dry and continental. Although the country is approximately comprised within the latitudes of Sicily and Lyons, it has a south Norwegian January and a Persian summer. Temperatures of more than 100° F. in the shade are common, and the heat is rendered still more unbearable by the reflection from a soil destitute of vegetation. The winter is for the most part so cold that the average temperature of January is below the freezing point, and even reaches 0° F. Snow falls for several months on the lower Syr-Darya, and, were it not blown away by the winds, sledge-communication would be possible. This river is frozen for an average of 123 days every year in its lower parts and nearly 100 days at Perovsk.
>
> "At Tashkent there is snow during two months and temperatures of 10° F. have been observed; on the other hand the maximum observation is 108°. To the south of Khodzhent the winter becomes more clement. Absence of rain is the distinctive feature of the climate. Although it rains and snows heavily on the mountains, only 11 in. of rain and snow fall throughout the year at Tashkent, at the base of the highlands; and the steppes of the lower Amu have less. A few showers are all that fall from the almost invariably cloudless sky above the Transcaspian steppes."

The southern lowlands of these Republics include climatic regions similar to Florida and California.

We shall have much to say in later chapters of the conditions and

developments in the five Soviet Republics of Central Asia, and for that reason, for purposes of comparison between conditions under the Tsarist Government and today, we wish to quote a few more extracts from the article in the *Encyclopædia Britannica* regarding Russian Turkestan. Respecting agriculture the article states:

"The arable land, being limited to the irrigated terraces of loess, occupies little more than 2 per cent of the whole area of West Turkestan. The remainder is divided between pasture land (less than 44 per cent) and desert (54 per cent). Owing to a very equitable distribution of irrigation water in accordance with Moslem law, agriculture and gardening have reached a high stage of development in the oases. Altogether close upon 4,000,000 acres are irrigated, and the crops are usually taken every year. Wheat, barley, millet, peas, lentils, rice, sorghum, lucerne and cotton are the chief agricultural products. Carrots, melons, vegetable marrows, cucumbers and onions are extensively grown. Rye and oats are cultivated at Kazalinsk and Kopal. Corn is exported.

"Owing to the irrigation, total failure of crops and consequent famines are unknown, unless among the Kirghiz shepherds. The kitchen gardens of the Mahommedans are, as a rule, admirably kept. The cultivation of cotton is extending rapidly—from 1,300 acres in 1883 to 531,000 acres in 1902, of which 402,000 acres were in Ferghana.

"Sericulture, a growing industry, is chiefly carried on in Ferghana, whence silk cocoons are an important item of export, the output having doubled between 1892 and 1903 (3,869 tons). Livestock breeding is extensively pursued. The flocks of sheep on the Kirghiz steppe are so large that the proprietors themselves do not know their exact numbers."

As regards minerals the article declares:

"The mineral wealth of Turkestan is considerable. Traces of auriferous sands have been discovered at many places, but the percentage of gold is too poor to make the working remunerative. Silver, lead and iron ores occur in several localities; but the want of fuel is an obstacle to their exploitation. The vast coal beds of Kulja and some inferior ones in Samarkand are not seriously worked. The petroleum wells of Ferghana and the beds of graphite about Zairamnor are neglected. There are abundant deposits of gypsum, alum, kaolin, marble and similar materials. Asphalt is obtained in Ferghana.

"Notwithstanding the salt springs of Ferghana and Syr-Darya, the

salt lakes of the region, and the rock-salt strata of the Alexander Mountains, salt is imported."

Respecting industry and trade the article stated:

"Turkestan has no manufacturing industry carried on by means of machinery, except distilleries and establishments for dressing raw cotton. These last have greatly increased in number; over a score are driven by steam and about a hundred by water. But there is a great variety of artisan work, such as copper and brass, paper, knives (at Bukhara), silver filigree, shoes, caps (at Samarkand and Andizhan) and carpets; but most of these have been for some time declining and now stand at a rather low level. Trade is very actively carried on. Tashkent and Bukhara are the chief commercial centres, the principal articles of export to Russia, via Orenburg and Semipalatinsk, being raw cotton and silk, cattle and their products, while manufactured wares are imported in return. There is also an import and export trade to and from Urumchi and China, via Kulja and Ak-su."

"Water is life" in these territories, but according to the article the rivers were drying up:

"Two rivers only—the Syr and the Amu—succeeded in getting across the desert and reaching the sea of Aral. But their former tributaries no longer run their full course: the glacier-fed Zeravshan dries up amid the gardens of Bukhara soon after emerging from the highlands; and the Tedzhen and the Murghab lose themselves in the recesses of the Kara-kum desert. The only tributaries which the Amu retains are those whose whole course is within the highlands. In the north such formerly important tributaries of the Syr-Darya as the Chu, with its sub-tributary the Sary-su, now dry up some hundreds of miles before reaching the main stream."

Even that was not the whole story; the article continued:

"The whole area is now undergoing geological changes on a vast scale. Rivers have changed their courses, and lakes their outlines. Far away from their present shores the geologist finds indubitable signs of the recent presence of lakes in the shells they have left amid the sands. Traces of former rivers and channels, which were the main arteries of prosperous regions within the period of written history, have now disappeared. Of the highly developed civilisations which grew up and flourished in Bactria, Bukhara and Samarkand, the last survivals are now undergoing rapid obliteration with the simultaneous desiccation of the rivers and lakes.

"The great 'Blue sea' of Central Asia, the sea of Aral, which at a

recent epoch (Post-Glacial) extended south-west as far as Sary-kamysh, and the shells of which are found north and east of its present shores 50 to 200 ft. above its present level (157 ft. above the ocean, and 248 above the Caspian), now occupies but a small portion of its former extent. It fills a shallow depression which is drying up with astonishing rapidity, so that the process of desiccation can be shown on surveys separated by intervals of only ten years; large parts of it, like Aibughir Gulf, have dried up since the Russians took possession of its shores. The whole country is dotted with lakes, which are rapidly disappearing under the hot winds of the deserts."

This article in the *Encyclopædia Britannica* certainly paints a very gloomy picture of the then conditions of the once famous and prosperous cities of Central Asia. It states:

"Populous cities adorned with fine monuments of Arabian architecture, numerous ruins of cities decayed, grand irrigation canals now lying dry, and written monuments of Arabian literature testify to a time when civilisation in Turkestan stood at a much higher level than at present. This period was during the first centuries after its conversion to Islam. Now all is in decay. The beautiful mosques and *madrasahs* (theological colleges) are dilapidated; no astronomers study the sky from the tops of their minarets; and the scholars of the *madrasahs* waste their time on the most deplorably puerile scholasticism. The inspiration of early belief has disappeared; the ruling motive of the mullahs (priests) is the thirst for personal enrichment, and the people no longer follow the khojas or theologians."

However, there was one bright spot in this dismal picture—i.e. the humble peasant. The article states:

"The agricultural labourer has preserved the uprightness, diligence and sobriety which characterise the Turkish peasant; but the richer inhabitants of the cities are grossly sensual."

The writer of the article was doubtful as to the possibility of reviving the intellectual life of the country. He declared:

"Schools are being diligently built; but the wants of the natives are subordinated to the supposed necessities of Russification."

Taking Russian Turkestan as a whole, physically it is made up of sharp contrasts. In the east there is much highland country, and two magnificent mountain ranges—i.e. Tien Shan and Altai Mountains. In the north and west it is flat, with much desert and steppe country.

The northern provinces were devoted to wheat-growing, but in the south sub-tropical plants and fruits grew in abundance: cotton,

grapes, etc. The plants and vegetation which grew in the deserts and steppe were those usually found in dry climates. Many different kinds of wild animals, depending on the nature of the different parts of the country, were still to be found, such as wild sheep, bears, tigers, wild camels, jackals, foxes, hares and wolves, wild boars, etc.

On the authority of the *Encyclopædia Britannica* the population of Russian Turkestan in 1906 was 5,746,000, but by 1911 it had risen to (approximately) 11,000,000.

The overall picture of Russian Turkestan at the outbreak of the first World War did not readily lend itself to the conception of a country in which Communist experiments would have successful results. Subsequent chapters will demonstrate how all these difficulties have been overcome.

CHAPTER II

THE EVOLUTION OF THE CENTRAL ASIAN STATES

IN very ancient times (1000 B.C.) the mountains and arid steppe regions of Central Asia were peopled by nomad cattle-breeders, whilst the valleys of the rivers were cultivated, and the people of the latter regions living a settled life reached a much higher stage of civilisation than the nomads of the steppes. It was in the agricultural areas that the first comparatively large-scale political State organisations were formed.

In the 7th century B.C. Central Asia came under the economic and political domination of the then more cultured countries, first of Media and later of Persia, and under this influence the primitive communal organisations in Central Asia were gradually dissolved.

In the course of his Persian campaigns (334–329 B.C.) Alexander the Great, after crossing the Hindu Kush Mountains, marched into Central Asia and occupied Bactria [1] (the ancient name of the country lying between the Hindu Kush range and the Amu-Darya (Oxus). Its capital, Bactria, is now called Balkh) and Sogdiana (the ancient name of the territory now covered by the districts of Samarkand and Bukhara). During this campaign Alexander destroyed the chief town of Sogdiana-Marakand (now Samarkand), then already a sizable and flourishing town.

In his further march towards the Syr-Darya, Alexander met with strong resistance on the part of the nomad tribes; to keep the latter down he built a number of fortresses, all called " Alexandria ", the last of these being constructed at Khodzhent (now Leninabad). In Sogdiana resistance was very stubborn. It took Alexander nearly three years to suppress the rebellions there, and during that time his troops almost completely devastated the flourishing valley of the Zeravshan.

After Alexander's death in 323 B.C. his empire fell apart, but the various States within it, including those of Central Asia, continued to maintain their political and economic connections with the Greek

[1] It was in Bactria that the prophet Zoroaster preached and gained his first adherents.

world, and Greek colonists, merchants and others exerted considerable influence in the spread of Greek culture.

Later, a Græco-Bactrian Kingdom was formed which was semi-independent and powerful for a time, but it was later torn by internal dissensions and continual usurpations of the Throne. This was one of the factors whereby Greek influence was steadily undermined, and in 159 B.C. Mongolian tribes (Scythians) conquered Sogdiana and in 139 B.C. Bactria. During the 1st century A.D. a union of nomadic tribes was formed under the rule of the Kushan tribe. The principal seat of the Kushan was Bactria, and their power was at its maximum at the end of the 1st and the beginning of the 2nd centuries A.D. At that time the Kushan dynasty held sway over eastern Turkestan, Sogdiana, Bactria, Afghanistan and part of northern India. At the end of the 2nd century A.D. Kushan rule began to decay; they lost more and more of their territory, and in the middle of the 5th century a related tribe (formerly under the rule of the Kushans), the Ephthalites or White Huns, subjugated Bactria and put a complete end to Kushan rule in Central Asia. The rule of the White Huns did not last very long; their power was undermined by the attacks of the Tiurk tribes and began to fall to pieces in the sixties of the 7th century.

During the first half of the 7th century the Arabs succeeded in defeating the military forces of Byzantium and of Sassanian Persia; in A.D. 646 they occupied Merv, and by 651 the whole of Khorasan. Beginning with the seventies of the 7th century, the Arabs marched into the heart of Central Asia.

At first they limited themselves to devastating the fertile valleys of the Amu-Darya and looting the towns of Bukhara, Ferghana and other Central Asian territories; in A.D. 713 they seized Samarkand. By the middle of the 8th century Arab conquest of Central Asia was complete, and Khorezm, Bukhara, etc., became part of the Arab caliphate. The Arabs stationed garrisons in important towns and settled their own people in Central Asia, but in most cases they ruled through the native chiefs and rulers. They also introduced the Mussulman religion, which was more or less readily accepted by the native merchant and land-owning class, who in return were given many privileges, but the masses of the people remained true to their own cult of Zoroastrianism.

Trade flourished under the Arabs, and many of the Central Asian towns became central points for rich caravans, but the agricultural population, not to speak of the slaves, were weighed down by heavy

taxation, and, as is always the case, bore the double burden of the foreign and native exploiters of their labour.

In A.D. 776 a rebellion led by Makanna—a native of Merv—broke out against the Arabs and their supporters. The rebels had many successes, and were only crushed in 783, and even then local risings occurred from time to time.

In the last years of the 9th century Ismail-Ibn-Akhmed, founder of the Samanid dynasty, after crushing all peasant risings in the districts of Bukhara, became all-powerful there, and made Bukhara the capital of all his domains. The Samanids formed a powerful State and carried on a determined struggle against the nomad tribes which continued to attack the fertile oases and towns of Central Asia. At the same time the establishment of comparative peace led, for that period, to considerable economic and trade development. During the latter years of the 9th century and in the 10th century feudalism was established, but at the end of the 10th century the Samanid State was destroyed by Tiurk tribes (living in the valleys of the Ili and Chu rivers), and the Karakhanid dynasty then came to power. Under them many fine buildings were erected in the towns of Central Asia. A splendid minaret in Bukhara is one monument to these activities; there are a number of others.

The Seldzhuks—a Turkish dynasty who came from the Turkmenian steppes—reigned over large parts of Asia in the 11th, 12th and 13th centuries. By that time the power of the Arabian caliphates had dwindled to a shadow of their former might. Merv formed the capital of the Seldzhuk State and became a flourishing centre in which were five palaces, a water-supply system, mesheds and libraries. But in 1141, Sindzhar, the then powerful Seldzhuk Sultan, suffered a heavy defeat near Samarkand at the hands of the rapidly rising empire of the Karakitai (a Central Asian people). This resulted in weakening the Seldzhuks, but the final blow against them was dealt by the nomad Turkmenians who were subject to the Seldzhuks.

In return for using their pastures, the Turkmenians had been compelled to supply annually 24,000 sheep for the Sultan's kitchens. In addition, they were subjected to many burdens by tax-gatherers and other officials. Against all this they broke out in rebellion in 1153, during which a tax-gatherer was killed. Sindzhar led an expedition against them, but he was defeated and taken prisoner; after three years of captivity he escaped, but could not restore the greatness of his empire, and in 1157 he died.

In the meantime the Turkmenians had moved on Merv and plundered it, as well as other towns of Khorasan. The Seldzhuk empire fell first into the hands of the Karakitai and then into those of the Khwarizm shahs. Although apparently very flourishing, Khwarizm at that time was by no means a well-knit centralised State. The shahs were opposed openly or secretly by various rivals, including some of the higher Mussulman clergy, whilst the masses of the people who bore on their shoulders all the splendours of the Court, clergy and rich landowners were anything but content.

Early in the 13th century the Mongols under Genghiz Khan marched on Central Asia. Although the population often offered heroic resistance, all too frequently military commanders, the higher clergy and the feudal lords either panicked or for other reasons gave in to the Mongols. In 1220 Genghiz Khan's army entered Bukhara, which they sacked, and later Samarkand, Merv and other towns, in most of which the population were largely massacred, although the artisans were spared and made into slaves. Merv was devastated and the then famous irrigation dams destroyed.

The rule of the Mongols was extremely oppressive, and in Bukhara and the surrounding districts there were a number of successful peasant risings in 1238, in the course of which the native feudal lords, merchants and some of the clergy who sided with the Mongols were driven out. But in the end the risings were suppressed by the Mongols, who, however, frightened by these revolts, sought to allay discontent by issuing laws abolishing some of the worst abuses suffered by the common people.

The rule of the Mongols in Central Asia, with various vicissitudes and in various forms, lasted for several centuries. In 1370, Timur i Leng (Timur the Lame), or better known as Tamerlane (1336–98), after much strenuous fighting with rivals, was proclaimed sovereign of Balkh and mounted the throne of Samarkand, the capital of his dominions. Tamerlane continued to extend his rule, and finally in 1395 he defeated the already weakening Golden Horde (which at that time held sway over a very large part of Russia) and formed his own mighty empire.

Tamerlane is known in history as a military genius and a ruthless and cruel conqueror who stopped at nothing to further the aggrandisement of his domains. He razed to the ground many conquered towns and put their people to cruel death. He brought untold treasure and slaves from afar to construct and beautify his native

town of Shahr-i-Sabz and his capital, Samarkand. With the remains of his magnificent buildings in the latter town we deal in another chapter. He was at the same time a clever politician, and knew how to use for his own ends the rivalry between the various Mussulman sects, although he proclaimed himself to be a faithful son of Islam. He also understood the value of learning and did his best to attract learned men to Samarkand. One of his successors, Ulug-Beg, continued this policy, and indeed did a great deal to raise the cultural level of his domains; but after Timur's death his empire, built on conquest and oppression, fell to pieces, partly as a result of the violent quarrels between his sons, grandsons and powerful emirs. Ulug-Beg, who united Khorezm and Ferghana to Samarkand, tried to extend his domains, but his encouragement of science and culture generally earned him the enmity of the Mussulman clergy, who aided risings against him which ended in his assassination in 1449 by his son.

Ulug-Beg's death was followed by further violent quarrels and confusions which helped materially the conquest of the region by the then nomad Uzbeks. The Uzbeks were a combination of Tiurk and Mongol tribes who in the 15th century constituted a section of the Golden Horde speaking the Tiurk language, who took their name from the Golden Horde Khan-Uzbek.

By the beginning of the 16th century the Uzbek position became consolidated and two Uzbek Khanates—Bukhara and Khiva—were formed. The Uzbek higher nobility seized the land, and the people on it—largely Tadzhiks—became their serfs. Step by step the poorer Uzbeks settled down and also began to work on the land. They intermingled with the Tadzhiks and other native tribes to form a single, to a large extent settled, Uzbek nationality.

In the middle of the 15th century another horde separated itself from the Uzbek Horde; at the beginning of the 16th century this horde spread over the north-west and called themselves Kazakhs (meaning, in Tiurk, free people). They occupied a large part of present-day Kazakhstan. But whilst the Uzbeks largely settled down in the districts of the oases of Central Asia, the Kazakhs continued as nomad cattle-breeders.

During the latter half of the 16th century diplomatic and trade relations were established between Bukhara and Moscow. The Uzbeks, mingling more and more with the local native populations, became more and more a settled agricultural people. In the middle of the 17th century the earlier artificial irrigation system in Khiva was

restored. Connections between the Kazakhs and Moscow also started in the 16th century and developed towards the end of the 17th century.

During the whole of the 16th and 17th centuries there was constant fighting between various nationalities and Khanates on the territory occupied both by the Uzbeks and the Kazakhs.

Soviet scientific exploring expeditions have thrown much light on very ancient and later life in these areas. An expedition headed by S. N. Tolstov has worked in the deserts of Soviet Khwarizm (Uzbekistan and Turkmenia) since 1937. The expedition was equipped by the Marr Institute of the History of Material Culture, with the participation of a number of other Moscow, Leningrad, Tashkent, Ashkhabad and Turtkul Institutes. Among other organisations participating are the Uzbek Branch (now the Uzbek Academy) and the Turkmenian Branch of the Academy of Sciences of the U.S.S.R., the State Hermitage Museum, the State Museum of History, the All-Union Academy of Architecture, the National Museum of the Kara-Kalpak Autonomous Soviet Republic and the Department of History of Moscow University; the expedition is continuing the study of Khwarizm begun by Yakubovsky (1928–29) and Voevodsky (1934).

We take the following information from an account of the work of the expedition given by Professor Tolstov.

The first surveys made in 1937 by Y. G. Gulyamov and A. I. Terenozhkin brought to light much new data on the history of Khwarizm in the 6th century—that is, on the eve of the Arab conquest, when the Afrigid dynasty ruled in Khwarizm.

During the years that followed the work was extended, first on the right and then on the left bank of the Amu-Darya, until the expedition had delved so deep into antiquity as to reach the early sources of the Khwarizm civilisation and beyond, to a period of 5,000 years ago, when primitive hunters and fishers lived in their conical communal houses amongst the sand-dunes around the swampy lakes of the Amu-Darya, and made their weapons from flint and bones.

During four years of field work the expedition covered 1,500 miles, registered and took down the descriptions of over 300 archæological relics covering a period from the turn of the 3rd and 4th millennia B.C. to the 16th century A.D.; fourteen of these objects became the scene of more or less extensive excavations.

The data gathered by the expedition show that in the Bronze Age Khwarizm and the contiguous Kara-Kum and Kzyl-Kum deserts formed part of the extensive " Bronze Age Steppe Culture ", which

included the whole area of the Ukrainian, Volga, Kazakhstan and South Siberian steppes. The culture of Khwarizm was closely akin to that of these districts, but was quite distinct from that of the foothill regions of Central Asia as typified by the Anau village and similar Bronze Age relics.

" At the same time in the 3rd and 2nd millennia B.C. and even later, Khwarizm culture," says Tolstov, " bears traces of the influence of Anau culture, while the later strata of Anau (known as Anau II and III) show the acquisition of elements of the ' Steppe Culture ', no doubt closely connected with Khwarizm. Even in the early epoch we see the role of Khwarizm as an important cultural link between the districts of Central and Anterior Asia on the one hand, and between the ancient peoples of Eastern Europe, Kazakhstan and southern Siberia on the other, a role which Khwarizm continued to play throughout its history."

The expedition proved that a series of ancient coins and a number of silver bowls and dishes, dating back to the 6th century A.D., which were found in various parts of the Volga and Kama basins, came originally from Khwarizm, showing the extensive economic and cultural relations between Khwarizm and the East European tribes.

Some thirty years ago Professor V. A. Gorodtsov, a Russian archæologist, stated that then unknown ancient seats of culture in Central Asia must have played an important role in the formation of the Bronze Age cultural centres in eastern Europe and Siberia. A later Neolithic culture in Khwarizm (at the turn of the 4th and 3rd millennia B.C.) was discovered in 1939. This is the oldest culture so far found in this region; it has been given the name of the Kelteminar culture, and again brings to the fore the question of the interconnection between these cultures, for it proved to be closely related to the Afanasiev culture of southern Siberia, where a number of shells have been found such as are met with only at the mouth of the Amu-Darya.

During the 1940 excavations a large number of ornaments were discovered made from shells which are found only in the Arabian Gulf, the Persian Gulf and the Red Sea. Flint weapons, vessels with pointed bases and a stamped ornament remind one of the Neolithic period of the Kama basin, the Urals and southern Siberia on the one hand, and the still little studied Neolithic relics of northern India on the other.

" Here," says Tolstov, " we apparently have traces of extensive,

ancient ethnic links dating back to the turn of the 4th and 3rd millennia B.C. which gave rise to those common features which linguists long ago discovered in the pre-Aryan tongues of India, the Munda and Dravidian languages, and the Ugrian languages of the far north. It is possible that these links were a basis for the formation of the eastern (satem) branch of the Indo-European languages which include the Slav languages, Latvian, Lithuanian, Indian, Iranian and Armenian languages."

Indian motifs stand out clearly in Khwarizm art in the first centuries A.D. prior to the Arab conquest. The expedition discovered the penetration of Buddhism into Khwarizm in the Kushan period. The most obvious sign of Indian influence is a four-armed female deity used to ornament Khwarizmian dishes and seals in the 6th to 8th centuries A.D.

"These are only the first steps in historical generalisation," says Professor Tolstov, "but they raise a number of important questions on the origin of many peoples in the U.S.S.R. and show the deep-going and varied relations which existed between peoples of various regions in the distant past.

"An analysis of the material characterising the Stone and Bronze Ages in Khwarizm throws light on many aspects of the working and social life of the ancient inhabitants of that country."

At the turn of the 4th and 3rd millennia B.C., the period of the "Kelteminar" Neolithic culture, fishermen and hunters lived in settlements in the sand-dunes and amongst the thick forest and reed-jungles on the islands and banks of the Amu delta. These people lived in communal houses, oval in shape, 22 by 16 metres in area and 10 metres in height; the high, conical roofs of these houses were supported by a complicated system of pillars and beams.

In the centre of each house stood the sacred hearth, the fire on which was never allowed to go out; the site of this hearth was marked by a thick layer of pure white ash lying on sand that had been burnt red to a tremendous depth. The inhabitants of the communal house cooked their food at other hearths placed around the sacred fire. These are the early origins of the sacred fires of the Zoroastrians. This type of dwelling is also characteristic of Khwarizm in the Bronze and Early Iron Ages at the turn of the 2nd and 1st millennia B.C.

People still lived on the sandhills, for the land that was then being drained by canals was still too damp for habitation. Their houses, however, were strongly built and long in shape, stretching for dozens of metres along the crest of a hill, and in design something like the

famous " long houses " of the American Indians. This is the period of the primitive " hoe cultivation " of the soil, when irrigation was still unknown and the natural moisture of rain-watered land was used.

The greater part of the material obtained by the expedition, however, refers to a period much nearer to us, a time when the habitations of the primitive fishers and hunters of the Stone Age and the early tillers of the soil and herdsmen of the Bronze Age had been substituted by fortified mud villages which raised their walls over huge canals, now dry, that irrigated the very extensive fields of ancient Khwarizm.

" This was the time," says Tolstov, " when the rich and original civilisation of ancient Khwarizm flourished, a civilisation of which we had only the scanty, fragmentary information provided by ancient Persian inscriptions and Greek, Chinese and Iranian historical works, the sum total of which would not fill more than two printed pages with the history of Khwarizm.

" We now know definitely that the great Khwarizmian canals were built in the 8th and 7th centuries B.C., the period when the Khwarizm State first arose. There is every reason to believe that this was the formative period of the powerful but little-known kingdom, whose existence was indicated by J. Marquart and W. Tarn, and which is known traditionally to the Iranians as Airyan-Vejo, Kangha and Khwarizm and in Chinese traditions as Kang-Kiu. This State, which went through endless periods of rise and decline and carried on a fierce economic, diplomatic and armed struggle with its powerful neighbours, retained its geographical nucleus, Khwarizm and the lower reaches of the Syr-Darya (Jaxartes), at times extended its power over Soghdiana, the Middle Syr-Darya, part of Khorassan and the distant north-western districts—Southern Urals, the Volga and Azov Districts—and was the prototype and centre of the great State of the Khwarizm Shahs in the 12th and 13th centuries, a State which fell a victim to that terrible catastrophe, the Mongol invasion."

The most ancient record of this forgotten kingdom is the so-called " city of dwelling walls ", a huge fortified settlement the whole interior of which—a space of about a square kilometre—was devoid of all buildings and served as a gigantic cattle-pen. The people lived in dark, narrow, passage-like rooms with arched ceilings, built in several rows in the thickness of the city walls; in places the walls were as much as 18 metres thick.

This kind of dwelling corresponds exactly to the famous " Square Vara ", the legendary village built by the mythical Yima of the Avesta on the orders of Aghura Mazda.

Pictographic and hieroglyphic inscriptions which the expedition found on the cliffs of the north-western spurs of the Sultan Wizdag Mountains in 1940 apparently also belong to this or, perhaps, to an earlier period. Some of the symbols of these inscriptions are associated with the Early Indian writing on the seals found at Mahenjo Daro and with the Hittite and Early Elamite hieroglyphic writings.

The expedition established the fact that the ancient Khwarizmian civilisation reached its height during the period of the Kushan Empire, which was established as a result of the struggle of the Central Asiatic peoples against the rule of the Græco-Macedonian conquerors; the Kushan Empire extended its power beyond the bounds of Central Asia to northern India and Sinkiang. The comparative study of royal seals and some other data shows that the ruling dynasty of the Kushan Empire was a branch of the ancient Khwarizm-Kang-Kiu dynasty, the Siyavushidæ.

By the 1st and 2nd centuries A.D.—the most brilliant period in the history of the Kushan Empire—the irrigation system of Khwarizm reached its highest point of development. The canals greatly exceeded in number those later employed by medieval Khwarizm, and penetrated far into the desert. Numerous towns sprang up along the banks of these canals. Delicate porcelain work, numerous and varied statuettes of human beings and animals, made in a style that combined local traditions with a strong Græco-Buddhist influence (the latter's formation was closely connected with the Kushan Empire), carved stone seals with representations of deer wounded by an arrow, griffons, horsemen and hippokampos, speak of an original and very high development of art and a highly developed industrial craftsmanship in ancient Khwarizm in this period.

Rich material for the study of the social and economic history of ancient Khwarizm is provided by the various types of ancient Khwarizmian settlements.

The oldest of them, dating back to the pre-Kushan period—that is, the last centuries B.C.—shows that the ruling type of settlement was a village, fortified with rammed earthen walls, which served as the dwelling-place of one or more clan-communities. The communal form of social life still prevailed, as it did in the " city of dwelling walls ", although the type of dwelling had changed, apparently on

account of the declining importance of animal husbandry as compared with farming. The ruins of Djanbas-Kala in the present-day Karakalpak Autonomous Republic are a very good instance of this type of settlement.

This township covered an area of 10 acres, and consisted of two huge dwellings, each with several dozen rooms. There are no signs of these having been divided into separate houses in any way. The special centre of the settlement was the " fire house ", with mighty rammed earth walls, which combined the functions of village temples where the sacred fire was kept burning, a place of assembly and a place for public feasts.

During the most prosperous period of the Kushan Empire this archaic type of settlement was replaced by a new one which shows the tremendous advances which had taken place in the social organisation of ancient Khwarizm; the leading type of settlement now is the family dwelling, an extensive fortified house with a large number of rooms for the patriarchal family community, fronted by a big courtyard surrounded by brick walls. The patriarchal family dwellings were erected close to one another, forming extensive settlements. Amongst the dwellings of the clan there are separate houses built on the same plan, but of enormous size, obviously evidence of the rise of a powerful aristocracy, which, however, still did not form a class antagonistic to the inhabitants of the clan dwellings.

" The relics of the next historical period," says Tolstov, " reveal the story of the fall of the Kushan Empire, the decline and collapse of the patriarchal, slave-owning social system of ancient Khwarizm and the rise of the first stages of the new feudal order, a picture which so far has no archæological material to illustrate it. Its structure has to be guessed, there being no written records at all of this period."

Political, social, economic and cultural processes go hand in hand. The cultivated belt becomes much smaller. Hundreds of thousands of acres of land, especially on the left bank of the Amu-Darya, were again conquered by the desert. The towns grew empty. The political relations between Khwarizm and the decaying Kushan Empire were broken off. In Khwarizm, the Afrighid dynasty came to power; this was a branch of the ancient local dynasty of the " Khwarizm Khosrows "—Siyavushids—related to the great Kushans of India, to the Parthian Arshakid dynasty and, as a comparative study of royal seals on coins has shown, to the Aspurgian dynasty of the Crimea. Later Khwarizmian literature speaks of Afrigh, who founded the younger

branch of the Siyavushid dynasty in the 4th century A.D., as a cruel despot who ruled the country from within the walls of a mighty castle at Fir on the banks of the Amu-Darya.

Evidence of political changes is given by the large number of locally minted Khwarizmian coins, issued by the Afrighidæ up to the 10th century, which are found together with Kushan coins. These coins, by the way, bear the earliest examples extant of Khwarizmian writing, and some results have already been obtained in efforts to decipher them.

Architecture at this period underwent great changes. In place of the large villages with their big family houses we have strongly fortified castles situated at some distance from each other; they had high towers, with living-rooms in them, and strong, rammed earth walls. The family of the lord lived in the upper rooms of the tower, entrance to which could be effected only across a drawbridge leading from a smaller tower built to one side of the high tower. Light entered the gloomy rooms of the tower only through the narrow slits of the embrasures. The aristocracy lived in castles similar in design, but much larger and more strongly fortified; they were also more luxuriously decorated, both inside and out.

The most effective in this respect was a 7th- or 8th-century castle which the Tolstov expedition excavated in 1938 at Teshik Kala. The tower is 16 metres high, and is decorated with half-columns surmounted by semi-circular arches; the upper part of the walls is decorated with earthen friezes, with archaic and simple ornaments consisting of alternate eight-leaved rosettes and five-leaved palmettes.

" This was not a state of feudalism," says Tolstov, " for the dwelling of the cultivator and that of the aristocrat differed from each other only in size; the cultivators lived behind the walls of manor-houses fortified like castles. The economy of the aristocracy was still based on slave labour; the slaves lived in the numerous buildings in the courtyards of the castles. The traditions of the patriarchal community were still retained. One sign of this is the continuation of the custom of burying the bones of all the dead of one family, after the flesh had rotted away, in one large alabaster vessel which was kept in one of the rooms of the tower of the castle or manor-house.

" The social life of the Afrighid epoch, however, shows us that the country was on the threshold of feudalism. The fortifications, both of the castles of the aristocracy and the manor-houses of the cultivators, shows a weakening of the central political power, frequency of the

raids of the nomad tribes, Hun-Ephthalites and Turks, and tense internal social contradictions, a fierce struggle between the aristocracy and the still free peasantry. As soon as Khwarizm and the other Central Asiatic States of that period came within the orbit of written records, it becomes clear that there was a sharp class struggle in progress."

Cities of a new type began to appear towards the end of the Afrighid era; they grew up under the walls of the castles of the more powerful aristocrats.

It is interesting to note that the isolated geographical position of Khwarizm led to its retaining the ancient Hellenic–Kushan cultural traditions longer than other districts; the new influences of Sassanid Iran did not make themselves felt immediately. This is seen with great clarity in the Khwarizmian coins, which until the 15th century retained their early Kushan form, which itself came from the Græco-Bactrian civilisation; other evidence is to be found in Khwarizmian art, which continued in the old Indo-Buddhist traditions. The figure of the four-armed goddess is found on seals and bowls of the 7th and 8th centuries, and statuettes of the rhinoceros were found in an 8th-century castle.

Khwarizmian art of this period, formed at the time of constant alarms and fierce internal and external wars which determined the "castle civilisation" of the Afrighid epoch, was characterised by Makdisi in the 10th century as follows: "They are a people of intelligence, science, gifted and educated . . . a hospitable people, brave and strong in battle . . . but they are reticent, have no elegance, brilliance or finesse" (as quoted by Tolstov).

The next historical stage covered by the researches of the expedition is the period of Khwarizm's second rise to power, when the country developed from the position of a small vassal State to that of a mighty eastern empire, when the power of Khwarizm's capital, Urgench, spread from the Aral Sea to the Indus and from Iran to Ferghana.

The work of the expeditions shows that the empire founded by the Khwarizm shahs was not the result of an accidental combination of political forces; the way was paved by a lengthy period of economic and political progress which made Khwarizm a flourishing country described by Yakut[1] as "one of the richest and most civilised countries of the east".

[1] Yakut or Yāqūt (1179–1229) a noted Arab traveller, geographer and biographer, born in Greece of Greek parentage, brought up in Syria as the slave of a Hama merchant.

Once again the lands that had been abandoned since ancient times came under cultivation. The cultivated belt, especially on the left bank of the Amu-Darya, moved forward dozens of miles into the desert, although it still did not reach the bounds of the cultivated area of antiquity. The old towns flourished and new ones were built. Along the Amu-Darya, on the roads to Merv, Bukhara and Balkh, many forts and caravanserais were built to ensure Khwarizmian rule over the main strategic and trade roads to the south. Khwarizmian outposts extended far into the Kara-Kum desert; there is, for example, a unique fortress of hewn stone blocks at Dew-Kala, in the very heart of the Kara-Kum.

The type of settlement again changed. In place of the fortified manor-houses and castles, we find the fortified houses of the peasantry of feudal Khwarizm grouped around the castles of the aristocracy. The latter, however, were not so strongly fortified as before. The growth of political centralisation, the increase of the external political power of Khwarizm made the menacing fortress of Afrighid times unnecessary.

Yakut wrote that: " The majority of the settlements of Khwarizm are towns with markets, all conveniences and shops. A settlement without a market place is a rare thing. All this in an atmosphere of general security and complete serenity " (as quoted by Tolstov).

" The evidence offered by the Arab scientist must not, however, be overestimated," says Tolstov, " Khwarizm in the period of the ' Great Khwarizm Shahs ' was no stranger to sharp class conflicts and feudal dissension. Compared with the Afrighid times, however, the epoch of general progress and prosperity in feudal Khwarizm must be regarded as a peaceful period which enabled Khwarizm to assume a dominant position in an eastern world that was torn with feudal dissension.

" Behind its rampart of deserts, at the junction of main trade routes, the fertile oasis of Khwarizm had every opportunity of becoming what it became under the Khwarizm Shahs Atsyzs, Tekesh and Muhammed."

The severe lines of Afrighid architecture gave way to lighter and more graceful forms. Houses with high arched entrances, with fine carvings on the clay walls, took the place of the war-like castles. The massive proportions of the Afrighid semi-columns were abandoned for the lighter and more graceful columns which ornamented the houses of the time of the Khwarizm Shahs.

The simple forms of the vessels changed to rich and varied porcelain ware with multi-coloured ornaments. This was a new epoch, a new civilisation, and a detailed analysis of the finds made showed that it was the successor to Afrighid Khwarizm.

The catastrophe of the Mongol invasion destroyed the civilisation of the Khwarizm renaissance. Again the fields became bare and the canals dried up, again the dead cities fell into ruin. Only the north-western part of Khwarizm, the territory around Urgench, continued to develop the medieval Khwarizm civilisation during the time of the Golden Horde. Even here, by the end of the 14th century, Timur's bloody punitive expedition put an end to that development.

Giving a general description of the scene as it meets the present-day traveller, Professor Tolstov says:

"The fair, green oasis of Khwarizm, the 'Central Asiatic Egypt', is a flourishing district nestling amongst the lower reaches of the Amu-Darya (Oxus) like a fertile island in a sea of sand, an outpost of tilled earth driven deep into the endless desert and sandy plains of the Aralo-Caspian depression, between the Kara-Kum (the Black Sands) and the Kzyl-Kum (the Red Sands).

"For many dozens of miles to the east and west of the Khwarizm cultivated belt lie waterless sands where the traveller finds traces of the handiwork of man at every step.

"The channels of ancient canals can be followed across the sand-swept 'takys', huge clay deposits in the desert, covered with scrub and thorn. Throughout the whole district, in some places with greater frequency than in others, one finds traces of buildings, isolated estates, fortified castles, villages and occasional large towns. Some have been levelled with the ground, others still have massive 30-foot mud walls and menacing towers with narrow embrasures.

"In some places the ruins have been so well preserved that it is difficult to believe that one is in the desert and not in that prosperous well-populated country of which the Arab geographer Yakut, who visited Khwarizm at the beginning of the 13th century, wrote:

"'There are many isolated houses and castles in their fields. It is rare that your eyes fall on untilled land. There is no difference (in the density of the population) whether you are in a country district or in the market places. I do not think there are such wide lands as those of Khwarizm anywhere in the whole world, or lands more densely populated.'

"I cannot forget the impression I received one evening when my

Kazakh companion and I climbed to the top of the fortress tower at Angka-Kala, scaring on our way the steppe foxes that had found shelter there. Against the crimson background of a stormy sunset (there was a mighty sandstorm next day), there lay before us, between sand ridges lit with the sun's last rays, countless black silhouettes of the houses and towers of a dead oasis, Berkut Kala, 17 kilometres in extent from north to south; it was the silhouette of a huge city, and only the deathly silence of the desert told us that life had left those lands which the sands had conquered.

" The huge open spaces between the buildings were covered with traces of man's labour. Countless potsherds, splinters of ancient glass, the fragments of bronze ornaments, bronze arrow-heads, ancient seals with carved representations of horsemen, griffons, deer and birds, statuettes of horses, camels, monkeys, rhinoceroses and people in ancient raiment, coins minted 1,500 years ago by the Khwarizm Shahs and 2,000 years ago by the mighty Central Asiatic–Indian Empire of the Kushans who held all the lands from the Aral Sea to Benares under their sway—these are but a few of the finds in which the ' land of ancient irrigation ' of Khwarizm abounds."

CHAPTER III

THE RUSSIAN CONQUEST OF THE CENTRAL ASIAN KHANATES

By the middle of the 19th century a more or less regular trade had developed between Russia and Central Asia, particularly between the Russian towns of Orenburg, Nizhni-Novgorod, Irbit and the Central Asian towns of Khiva, Bukhara and Tashkent. The Tsarist Government encouraged this trade; customs dues on goods crossing the Central Asian frontiers were very low, and sometimes even these were waived at certain trading-points. Among the chief items of export from Russia to Central Asia were: metals and metal goods, particularly iron and copper; cotton and woollen manufactures; leather, tobacco and sugar—some two-thirds of Russia's total metal and metal-goods exports were to Central Asia. To Europe, Russia exported mainly agricultural products, but to Central Asia she sent mainly manufactures.

The well-known traveller in the sixties of the 19th century, Vambéry, noted that in the bazaars of Bukhara there were comparatively few western European goods, but many kinds of Russian goods. Huge Russian samovars were to be seen in the tea-houses, and there was scarcely a house or tent which did not contain some objects of Russian manufacture.

Exports from Central Asia to Russia consisted mainly of agricultural goods, raw wool, cotton, etc., from Kazakhstan; livestock took first place. When, as a result of the American Civil War of 1861–65, cotton exports from America to Russia ceased, Russian textile manufacturers became particularly interested in cotton exports from Central Asia. Between 1857 and 1867 the export of cotton manufactures to Central Asia from Russia increased over five times.

The Russian conquest of the entire territory of Central Asia or western Turkestan was a tremendous military undertaking, and was only completed in the course of two centuries. However, military operations were not an uninterrupted process during the whole of this period. Arminius Vambéry wrote:

> " It was the work of two centuries accomplished in a wonderful way, with that characteristic Muscovite tenacity, cunning and recklessness, which have wrought so many wonders and surprises to the western world." [1]

It began in the days of Peter the Great (1682–1725). At that time the entire territory of Siberia right to the Bering Sea was in Russian hands, but the Khanates of Central Asia and the tribes subject to them were still unconquered.

In 1717 Peter the Great sent an expedition against Khiva, with a view to subjugating her. This was part of Peter's general policy to move the Russian frontiers farther east and, among other things, to give Russia an opportunity to act as an intermediary in the trade between Europe and Asia. This was parallel to his effort to open a window towards the west by his northern campaign against Sweden, which ended successfully with the Peace of Nystad, 1721. But Peter's Khiva expedition failed.

" In 1717 Peter the Great," wrote the well-known Russian historian Platonov, " attempted to take Central Asia under his control by siding with one Khan against another and mixing up in their feuds, but only disaster came out of this. It was found advisable thereafter to advance more slowly and to erect in the steppes and deserts a number of forts to protect the frontier districts settled by Russians." [2]

Peter could not pursue his work in this area because he had to turn his attention to the Swedes and the Tatars, who were blocking his advance to the Baltic and Black Seas, but his successors continued the task which he had begun. Platonov states:

> " This creeping up proceeded from two directions: from Siberia and the Urals in the north, and from the Caspian in the west. In the 18th century the principal bases of support for this slow offensive movement were the cities of Orenburg and Semipalatinsk in the north, and Krasnovodsk on the Caspian in the west. By the middle of the 19th century the Kirghiz of northern Turkestan were already subjugated, and the Russian troops had gained a firm foothold on the Syr-Darya (the fortress of Perovsk) and the left bank of the Ili (the city of Verny). After this began the conquest of the Khanates proper." [3]

[1] *The Coming Struggle for India.*
[2] *History of Russia*, p. 388.
[3] Ibid., p. 388.

The Khanates proper to which Platonov refers were three in number: Kokand, Khiva and Bukhara. In addition, there were the semi-nomadic tribes.

The conquest of Central Asia was of great significance to Russia, because it not only formed a convenient source of raw cotton for the Russian textile industry, but also a good market for Russian manufactures. It also gave the advantages usually furnished by colonies to the military and officials of the conquering Power.

On the other hand, the penetration of Russia in Central Asia was regarded by Britain as a threat to her economic and political position in Asia generally, and in particular to her most important possession, India—hence the antagonism between these two Powers in the 19th century.

First a few words in regard to the conquest of Kazakhstan or northern Turkestan. Early in the 18th century the Kazakhs were divided into two sections, or hordes, as they were called. One of these, inhabiting territory bordering on China, recognised the suzerainty of that country; the other, located nearer Russia, came under the influence of the latter, and in 1731 negotiations had started between the Kazakh Khan and the Tsarist Government for the acceptance of Russian suzerainty. Actually, by about 1741, the Kazakhs had been practically subjected to Russian rule.

During the 1820's the Kazakh Khanates were liquidated. In 1834 the Novo-Alexandrov fort was built on the north-eastern bank of the Caspian Sea, and in 1835–37 a line of forts was built between Orsk and Troitsk. In 1845 new fortifications were built, and in 1847 Tsarist troops occupied the districts at the mouth of the Syr-Darya, built the Aral Fort and organised regular road traffic between Lake Aral and Orenburg. By the middle of the 19th century the Kazakhs had become Russian subjects, and the occupation of their territory continued on the pretext, when such was necessary, that the Kokand Khanates were making attacks on Kazakhs who were Russian subjects.

The Kazakh territory was included in the Russian Empire and re-divided into new administrative areas, and a large part of Kazakhstan was incorporated in the Urals, Akmolinsk and Semipalatinsk provinces. Later, to run on a little ahead, by an order of the Tsarist Government issued in 1868, the whole of the Kazakh Steppes were divided into four provinces: Akmolinsk, Semipalatinsk, Turgaisk and Uralsk. These provinces were further subdivided into various districts and villages, and, as was the case in all the conquered territories

of Central Asia, administration was mainly in the hands of Russian officials. True, the lower officials in the villages and rural districts were nominally elected by the native Kazakhs, but only under the watchful eye of the Russian authorities. In general, conditions in that part of Turkestan differed little from those in other parts of Russian Central Asia, which we describe below.

In 1853 the Kokand Fort Ak-Mechet (now Kzyl Orda), on the Syr-Darya, was captured, shipping was organised by the Russians on that river and a number of new forts were built along it.

At the same time the Russians marched into Central Asia from the north-east from Semipalatinsk, and in 1854 the fort of Verney (on the site of the old town of Alma-Ata, on the river of the same name) was constructed. Thus by the early 1850's Tsarist Russia had made very great advances from both the north-west and north-east on the Kokand Khanate, the most powerful of the Central Asian States. It was subsequently decided by Nicholas I and his Government to proceed with the conquest of Central Asia as speedily as possible.

However, being fully occupied at that time with the peasant question, the conquest of the Caucasus, the Polish rising of 1863 and relations with China, the Tsarist Government at first made only sporadic, although not insignificant, attacks on Central Asia, but in June 1864, after the final battle for the Caucasus had been won, the decisive assault was begun.

It is characteristic that the Tsarist Government considered it advisable to explain to the rest of Europe that the attack on Central Asia was of a " defensive " character. The Russians, being a European cultured people, were bound to defend themselves against the uncultured, nomadic barbarian Asiatics, and that the latter only respected force, and, perhaps not unnaturally, the Russian Foreign Secretary, Gorchakov, drew attention to the drive of other European countries for colonial conquests. At each step it was declared that the invasion was to be strictly limited.

However, in spite of the determined and even heroic resistance of the natives, the Russian advances made pretty rapid progress; in September 1864 Chimkent was taken. Tashkent proved a harder nut to crack. Every house, every inch of that town was defended by the Uzbeks, but it was of no avail, and in June 1865 Tashkent fell; a year later this, the largest town in Central Asia, was formally incorporated in the Russian Empire.

In the spring of 1866 military operations were started against

the Bukhara Emirate, and by May, Khodzhent, Dzhizak and other towns and districts were taken, which opened up the direct road to Samarkand and Bukhara. In 1867 the newly-acquired territory was formed into the Government-General of Turkestan, with General von Kaufman at its head.

In March 1868 the Emir of Bukhara declared a holy war against the Russian troops; disturbances occurred in Tashkent and other conquered towns. Kaufman attacked at once, and in April 1868 moved on Samarkand (then the most holy Mussulman town in Central Asia), defeated the troops of the Emir of Bukhara and entered the town on May 2. Kaufman then continued his march towards Bukhara, taking Katta-Kurgan on June 2, but serious risings against the Russians in Samarkand forced him to turn back. The rising was suppressed, and the town was turned over to the soldiers for three days to pillage to their hearts' content. Parts of it were then burnt down and the rebels who were caught were shot.

Thus during the years 1864–68 the two most important Central Asiatic States—Kokand and Bukhara—were totally defeated, but, for external diplomatic reasons, they were not formally annexed to the Tsarist Empire. Instead " peace treaties " were concluded in 1868 with the Kokand Khanate and the Bukhara Emirate, whereby these States relinquished the lands actually conquered by Russia, recognised themselves as vassals of the latter and gave the Russians extremely favourable trading terms. The Russians took possession of some of the most fertile land, and, by the control of the upper reaches of the Zeravshan River, were in a position to cut off the water-supply from the town of Bukhara, and thus bring it to heel if at any time it showed signs of resistance.

Subsequently the Emirs of Bukhara became the completely submissive tools of the Tsarist Government, which in its turn helped the Emirs and their rich hangers-on to suppress any manifestations of popular resentment or uprising against the double oppression of Emirs and Tsarist officials.

In the meantime, antagonism between Russia and Britain for influence in Central Asia continued unabated. The British Government became alarmed for the safety of India, but only resorted to diplomatic action and threats. " England, justly disquieted by the Russian move towards Khiva," wrote Arminius Vambéry, " had found it advisable to try whether any diplomatic transactions with the three Khanates of Turkestan could not produce such an effect as to

stop the Russian progress. Lord Auckland imagined that by calling the attention of the rulers of the three Khanates to the impending danger, a union might be effected which would prove a barrier against Russia. This was the origin of the mission of the late Sir Alexander Burnes, an accomplished young Scotchman, who was well received at the Court of Nasrullah Khan, the father of the present Emir of Bukhara.

" His transactions secured to England a treaty of commerce; they produced also relations of amity between Bukhara and India; but neither Kokand nor Khiva could this clever diplomatist visit, and no sooner had he returned to Europe than, with the death of the chief Minister at Nasrullah, the effect of the happy journey vanished, and Bukhara remained as before, utterly heedless of coming events, and continuing, as before, to weaken the neighbouring States instead of giving them strength and support against the approaching danger."

As, however, neither side was strong enough to oust the other completely, an agreement was reached early in 1873 whereby Khiva was recognised as a Russian sphere of influence (or Protectorate), whilst Russia recognised the " independence " (i.e. in effect as a British sphere of influence) of Afghanistan.

Having thus come to an understanding with Britain, the Tsarist Government was free to " protect "—i.e. to turn to the conquest of—Khiva; an earlier attempt in 1838 to conquer Khiva had failed. In the spring of 1873 strong Russian armies marched against her, and in May Khiva surrendered without a battle.

After the subjugation of the three Khanates there remained the Turkoman tribes, " the semi-nomadic marauding Turkomans ", as Platonov called them. The Turkoman tribe of the Tekke suffered a shattering blow when their main centre, Geok-Tepe, and also Ashkhabad, were captured in 1881. The Turkomans were skilful and courageous fighters, and Geok-Tepe was valiantly defended, and nearly half the garrison perished before it was captured.

To quote Arminius Vambéry:

> " Suffice it to say, that courageous and heroic as was the defence of the besieged Turkomans, who fought under the lead of Makhdum-Kuli and Tekme Serdar, their two chieftains, the hardships and privations the Russians had to endure, and the extraordinary cool blood and doggedness they exhibited at that time, was in keeping with it." [1]

[1] *The Coming Struggle for India.*

The author continued that, thanks to this successful stroke:

> "Russia had almost entirely broken the strength and power of the hitherto mostly dreaded nomads of Central Asia. Thanks to the effect of modern arms and to her drilled army, she accomplished a feat neither Genghis Khan nor Timur, nor any of the Asiatic conquerors could boast of." [1]

But the whole of Turkoman country was not yet in Russian hands, and another three years passed before Merv finally acknowledged Russian rule. However, this was accomplished largely by stratagem, and Merv was entered and annexed in 1884. The capture of Merv caused widespread alarm among British authorities on India. Charles Marvin wrote in 1884:

> "The conquest of Merv is something more than annexation of a sand-desert oasis. It means the complete junction of the military forces of the Caucasus and Turkestan. It means, with the annexation of Akhal, the absorption of 100,000 of the best irregular cavalry in the world, at a week's march from the city of Herat. It means the meeting, for the first time, of the Cossack and the Afghan. It means the complete enclosure of Khiva within the Russian Empire, and the reduction of Bukhara from the independent position of a border State to the dependence of an incorporated province. It means the enclosure of more than 200,000 square miles of territory, and the addition to the Russian Empire of a region as large as France. It means the completion of the conquest of the Central Asian deserts, and the commencement of the annexation of the great fertile mountain region of Persia and Afghanistan. It means the deliberate occupation of a strategical point, fraught with political entanglements of such a widespread nature that, whether Russia desire it or not, she will be inevitably led, unless forestalled or checked by England, to Meshed, to Herat, to Balkh, and to Kabul. And she will not remain there. She will continue her swift advance until she triumphantly lays down her Cossack border alongside the Sepoy line of India."

In 1885 the Tedzhen oasis, which for a short time had been under Afghan rule, but which was inhabited by Turkomans, was annexed by Russia, thus bringing all the Turkoman country under Russian rule. By and large, by the end of 1885 the Russian conquests in

[1] *Op. cit.*

Central Asia were rounded off, the work of two centuries was completed. Merv, " one of the two keys to India " (Herat in Afghanistan being the second), was in Russian hands, and, for the first time since Alexander the Great, European troops debouched on the banks of the Oxus.

The Crimean War had not strengthened the bloc of States separating Russia from India. The Russian advance to the Oxus had strained relations with Great Britain to breaking point—although W. E. Gladstone, the Duke of Argyll and others saw nothing to be alarmed at—but differences were settled by diplomatic means, and the question of the Russian–Afghanistan frontier, in which Great Britain was keenly interested, was settled in 1887 by a frontier commission in which British representatives played a leading role.

Afghanistan was recognised as being outside the Russian sphere of influence, and the Tsarist Government pledged itself to respect the neutrality of that country. We have mentioned above that by 1885 Russian conquests in Central Asia had been rounded off, but, in passing, it may be mentioned that by that year much more had been attained: a thousand years of history was rounded off, and Russian territory stretched from the then Norwegian, Swedish, German, Austro-Hungarian and Rumanian frontiers to the Bering Straits and Vladivostok; and from the Arctic to the Black Sea and to the frontiers of Turkey, Persia, Afghanistan and China. The tiny principality of Kiev of the 9th century had expanded before the close of the 19th century into a mighty unbroken land empire second only to the British Empire in area.

What happened after the conquest of the three Khanates? Khan Khudayar had been left in possession of part of the Khanate of Kokand. But a revolt broke out in 1875, which was directed not only against Russia, but also against the Khan. A Russian army was despatched to Kokand, the rebellion was put down, and in 1876 the whole of the Khanate was incorporated into the realms of the Tsar and the provinces renamed " Ferghana Territory ".

In the case of Bukhara, part of the territory was incorporated in the Tsar's dominions, and the rest was left under the rule of the Emir or Khan. Arminius Vambéry wrote:

> " Of course the Emir had to pledge himself to be a true and faithful ally of Russia. He had to pay the heavy war indemnity, including all the robberies and embezzlements of Russian officers;

he had to place his sons under the tutorship of the Tsar in order to be brought up at St. Petersburg, in the very centre of the blackest infidelity.

"Of course Russia was very wise to leave him in the delusive dream of his independence; for besides the heavy costs involved by immediate annexation, the administration of the country by Russian officials would have proved a useless expense to the exchequer. This abstemious policy had borne its fruits—for Russia not only gained the consideration of the foe vanquished by her, but was also looked upon by the adjacent Khanates in a far better light than had been hitherto the case, since, according to Tatar notions, conquest was identical with murder, plunder and extirpation. Central Asia was really surprised to find mercy at the hands of the Christian victor." [1]

Respecting the Khanate of Khiva, the same author wrote:

"Russia again showed herself magnanimous by replacing the young Khan upon the paternal throne, after having taken away from him the whole country on the right bank of the Oxus, and imposed upon his neck the burden of a war indemnity which will weigh him down as long as he lives, and cripple even his successors, if any such are to come after him."

After the conquest of the Turkoman country the unfortunate natives were scattered in all directions, but the Russian commander, General Rohrberg, began to attract them back. To quote again Arminius Vambéry:

"He began by alluring the large masses of fugitives which were dispersed in every direction of the less accessible sands in the north of the Kara-Kum, invited them to re-occupy their former places, petted and encouraged them to go on with their usual work, promising, and giving too, all kinds of assistance; they were only asked to give up the arms they had concealed, and to keep quiet under the new order of things which awaited them. The returning Akhal-Tekke Turkomans presented the most pitiful aspect of dreary desolation and bewilderment; the greater portion of their property was lost and scattered; more than half of their cattle had perished in the desert. The haggard-looking and terror-stricken nomads, happy to save the last

[1] *Op. cit.*

resources of existence, were certainly the best material out of which the first nucleus of Russian peaceful subjects in the desert could be formed." [1]

The same author, in dealing with the pillaging of the Turkomans, gave some idea of the fine craftsmanship in which many of them engaged. He wrote:

> " The Government did all in its power to attract the sympathies of these poor wretches, but the Muscovite soldiery could not be restrained from pillaging to the last these half-naked inhabitants of the formerly flourishing Akhal country. Carpets, rugs, trinkets, jewellery, particularly arms inlaid with gold and silver, rich harnesses and saddles, went in loads beyond the Caspian and the Caucasus to Russia; and so great was the booty carried away from the desert and sold in the various Russian towns, that part of it even reached Hungary, and the writer of these lines had an opportunity of buying in Buda-Pesth carpets, embroideries and jewellery, the former property of Turkomen women." [2]

The conquest of the three Khanates and the Turkoman country raised enormously the prestige of Russia throughout Asia. There was the highest admiration for the might and fighting power of the great " White Padishah ", who had sent forth his troops from his magnificent palace on the banks of the Neva, and had far exceeded in military achievement the great names of Genghiz Khan, Timur and Nadir.

It was estimated that during the reign of Alexander II (1855–81) 400,000 square miles of territory in Central Asia were added to the Tsarist Empire—i.e. equal to (about) the areas of Great Britain, France and present-day Germany combined.

[1] *Op. cit.* [2] *Op. cit.*

CHAPTER IV

HOW THE TSARIST GOVERNMENT RULED THE CENTRAL ASIAN PROVINCES

THE Central Asian conquests became, in general, a Russian colony, and although the Bukhara and Khiva Khanates still existed, not only had a large proportion of their lands been directly annexed, but the Khanates themselves were in vassalage and at the mercy of the Russian authorities. Their " independence " was a complete sham.

In 1867 the Central Asian lands which had been incorporated in the Russian Empire became the Government-General of Turkestan (with Tashkent as its chief town), and in it were included the Syr-Darya and Semiretchensk Provinces; in 1868 the Zeravshan area, comprising land conquered from the Bukhara Khanate, was added, and in 1876, after the conquest of the Kokand Khanate, the whole of the land of this Khanate, renamed the Ferghana Territory, was added to the Turkestan Government-General. In 1886 the Turkmenian land seized by the Tsarist army was also added to the Turkestan Government-General under the name of the Transcaspian Province. In 1882 the Semiretchensk Province was transferred to the newly-created Steppe Government-General.

A military regime was established in Turkestan, and the military governors, often brutal men, such as Kaufman, Skobolev, Kurapatkin and many others, had, within certain limits, complete civil and military authority. They crushed expeditiously and mercilessly every manifestation of discontent amongst the people. The Russian officials kept aloof from the natives and treated them with distrust and contempt, as belonging to lower races. At the same time these officials were not averse to making an " honest penny " by taking bribes from these same despised natives when naked extortion proved unsuitable or inadvisable.

Imperialism, so far as its fundamental aim is concerned—i.e., the extortion of wealth from the exploitation of the native colonial peoples and territories—is much the same the world over, and Tsarist rule in Turkestan differed, in this respect, but little from British and French rule in their colonies. The aim in each case, however much

some of the methods adopted might differ, was to use the colonies as cheap sources of foodstuffs and raw material and as closed markets for the sale of manufactured goods of the imperialist Power. The primitive methods of agriculture and handicraft work were perpetuated, the industrial development of the provinces was prevented and the cultural growth of the native people discouraged and handicapped. The system of education—if that is the correct word—which largely consisted in reciting the Koran by rote, apparently continued as it had done for centuries.

A Tsarist official, A. Polovtsoff, who travelled extensively in these provinces prior to the November Revolution (1917), wrote:

> "In the morning you hear at certain places other voices: the humming of shrill young throats, occasionally interrupted by the gruff tones of an old man's remark, or else by the smart smack of a stick. This means that you are near a school. The pupils squat on the floor, swaying to and fro and shouting their lessons at the pitch of their lungs. The main object is to learn by heart the *suras* of the Koran, even if their exact meaning in Arabic is not clearly understood. The swaying motion is believed to develop the powers of memory. As for the master's long flexible wand, it strikes the boys only on their heads (if ever it strikes them at all), for it is the head which is the seat of understanding, and in case of disobedience or inattention it is the head which has to be recalled to order. Knowing the whole of the Koran by heart is thought of very highly."

Apart from the Koran they learned little else:

> "Education is mostly religion, and besides reading the Koran the schoolboys are taught how to assume in the right manner all the attitudes which are due in the course of the five daily prayers."[1]

It is interesting and instructive to recall today that on the eve of Indian independence the subcontinent was only about 10 per cent literate, that sixty years ago it was much lower, but that in that period Arminius Vambéry, in eulogising British educational work in India as compared with Russian in Central Asia, wrote:

> "There are 65,500 institutions, including schools and colleges of all sorts, and the number of students amounts to nearly two

[1] *The Land of Timur* (Recollections of Russian Turkestan). Methuen, 1932.

millions, out of which 72,200 are girls, at schools maintained for them especially.

This number of school-attending children is certainly not very large, for it shows only nine scholars to a thousand of the population; but where do we find, in the Mohammedan world, a similar average percentage, and what is the number of Bashkir, Kazan-Tatar and Tschuvashian students, supported by Russia, when compared with the above percentage?" [1]

That was written in 1885, and held up Britain in this respect as a model compared to Russia. Yet in 1947, in spite of the progress made in the intervening years, India was only 10 per cent literate. All this gives some measure of the educational backwardness of Russian Turkestan sixty-odd years ago. At the time of the November Revolution (1917) literacy varied throughout the Khanates and provinces of Turkestan from 1 to 2 per cent—considerably worse than in India at that time.

As in many Eastern countries where the masses were illiterate, the story-teller plied his vocation. A. Polovtsoff relates:

"Round various corners near the big tank you come upon larger squares where at sunset professional story-tellers carry on their trade. Good story-tellers bring together very considerable audiences, and there would not be room enough to gather a crowd close to the water. So everyone squats on the pavement—both those who attend and the one who relates. As for the tales, they follow the old rules of Sheherazade, going on day after day and breaking off every night just at the most exciting episode." [2]

The Tsarist conquest of all the Khanates and the Turkoman country did not improve the hard lot of the peasants (dekhkans) or of the craftsmen of the towns. The Khans (or Emirs) of Bukhara and Khiva were deprived of some of their territories, which were incorporated into those of the Russian Government-General, but they were left in possession of big areas, which they administered very much as before, but now as loyal vassals of the Tsar. Naturally there was always a representative of the Central Administration of St. Petersburg present to see that nothing was done that ran counter to its wishes.

The system was very similar to that of the Indian Princes under British rule. No doubt Russian rule even brought some advantage

[1] *The Coming Struggle for India.* [2] *Op. cit.*

to the Khans—i.e. the Russian army was better equipped than their own forces for putting down any revolts of their hard-pressed subjects. The Khans of Bukhara and Khiva at the time of the Russian November (1917) Revolution were very rich men, even by European standards, a subject to which we shall return later. The Emir of Bukhara possessed many residences, which apparently were a bad mixture of Eastern and Western standards. Describing the one at Kermineh, which was the official seat of the Government, A. Polovtsoff wrote:

> "The building has no particular charm, it even lacks character: the architecture is of a deplorable banality and the gardens but recently planted. The floors are covered with indifferent modern rugs, the electrical fittings are hideous; the house contains nothing of interest from an artistic standpoint. It is like other houses of Oriental potentates who attempt to live up to European standards without really understanding them.
>
> "Not feeling the Westerner's requirements nor knowing the customs which have established certain forms and created particular surroundings, these gentlemen choose European furniture with an Oriental absence of discrimination which fatally breeds the most unexpected assemblage of sundry articles, mostly gaudy and unsatisfactory. A rather amusing feature is the brass band which plays European tunes during meals; the performers learn their music exclusively by ear, the result being that they give forth familiar tunes fantastically distorted." [1]

Respecting the beys (the local lords) and the Mullahs (Moslem priests)—although they lost some of their lands and properties, they still lived tolerably well at the expense of the dekhkans. The land system was thus described by William Mandel: [2]

> "Huge tracts of land belonged to the Emir as such, as the chief feudal lord, and the income from them went into his personal treasury. There were also lands that were the hereditary possessions of the beys and others that belonged to the mosques and religious schools of this Mohammedan country. The land was worked generally on a share-cropping basis, with the peasant, dekhkan, retaining only one-fourth of the crop. Most cruelly exploited were those on lands granted by the Emir to his favourites. These grants were for definite and limited periods of time, during which all income and taxes went to the temporary lord.

[1] *Op. cit.* [2] *The Soviet Far East and Central Asia.*

> " In addition to the unbearable conditions of rent and share-cropping, the dekhkans, including those who had their own land, paid all sorts of feudal dues. Moreover, there were labour services to be performed in the building and dredging of irrigation canals, road and bridge maintenance, and the construction and repair of the walls of the fortified cities. In addition, the peasantry bore the burden of maintaining the administrative hierarchy, which received no salary from the Emir, but waxed fat on the imposition of all sorts of bridge and ford tolls, milling and weighing taxes, and court fines, of which the judge retained a definite percentage!
>
> " Outright slavery, based on prisoners of war and the poorest peasantry, also existed, as did primitive communal land ownership in the most backward areas. In the cities there were tradesmen and artisans. Feudal relationships, however, were dominant, and all other forms of economy paid tribute thereto."

The peasantry of European Russia were heavily taxed, but those of Turkestan, despite their greater poverty, were still more heavily burdened in this respect. The same author wrote:

> " The Tsar's taxes on the population of Russian Turkestan were between 50 and 150 per cent higher than those levelled upon the none-too-liberally treated people of European Russia. While the Tsar's tax-collectors took the place of the Emir's, where these had been overthrown, down below the social system remained unchanged. The Russian officers who took the place of the Emir's beys sold supposedly elective lower offices to the highest bidder, and the native lordlings who won in these clandestine auctions made sure to get back their investment and a sizable profit from the dekhkans—the peasantry." [1]

Many Russians flocked to southern Turkestan after the conquest; Army officers, Government officials, merchants, Cossacks, peasants and, of course, adventurers. These immigrants were welcomed by the Central Government at St. Petersburg because their presence strengthened Russian hold on the areas and created vested interests in maintaining Russian control there.

The newcomers wanted positions and land. The officers were at the head of the occupying forces, the officials took the places of the

[1] *Op. cit.*

ousted officials of the Khans, and the merchants brought with them Russian manufactured goods, which they exchanged for the local raw materials, and in the process of selling and buying they largely destroyed the old primitive balanced economy of the Khanates, just as in India the cotton manufacturers of Lancashire destroyed hand-loom production.

As regards the large-scale confiscation of land—the Soviet writer, N. Mikhailov,[1] states:

> "The lands of the outlying districts which were inhabited by the enslaved nationalities were declared to be 'State property with the right of alienation'. There followed a mass seizure of the most fertile ploughlands, which had been tilled by the age-long muscular labour of the natives.
>
> "The bayonet dictated the new distribution of peoples. Tribes, clans, nationalities, forced out by the Russian emigrants, went into the desert, the taiga, or mountains. Oases and foothills were covered on the map by the colour of an imperialist nation. The native, having lost his land and his cattle, became the drudge of the Russian colonist."

The poverty-stricken peasant of European Russia had little choice except "to strike the trail" if he was determined to better his harsh lot. The same writer stated:

> "The soldier in the conquered outlying districts was followed by the Russian peasant. It was not the intolerance of an established Church that drove him to the outskirts of the country, nor was it the notorious Russian passion for movement. He sought a way out of the backward and hungry village of the centre, burdened by the load of feudal survivals. He fled from the tiny plot of land he had received in 1861 in exchange for a heavy ransom when serfdom was abolished, and which was now melting away; he fled from the barren soil which he neither knew how nor was able to improve. The emigrant from the centre colonised land to the north of Caucasus, Central Asia, Siberia."

It has been estimated that in the territory of present-day Kazakhstan something like 100 million acres of land were confiscated from the natives and handed over to the Russian immigrants, and the same process was carried out in the other provinces. The ousted natives

[1] *Soviet Geography.*

packed their few belongings and, driving their cattle before them, took to the hills and deserts, where in many cases both owners and cattle died. The destruction of the old balanced economy—i.e. the growing of cotton and its weaving locally—still further increased the poverty and lowered, or even abolished, the independence of the natives. This process was thus described by Mr. William Mandel:

> " Prior to the conquest, cotton-growing had been one of many cultures in Central Asia and fabric had been woven locally, as in India. Cheap manufactured textiles soon drove the local product off the market, and placed the cotton-grower at the mercy of the Russian buyer. The latter extended credit to the peasants at rates of four per cent *per month* and more.
>
> " The peasantry was forced into cotton-growing both by the need of ready cash resulting from the disruption of the self-sufficient village economy under the flood of Russian goods, and by the pressure of the beys. The large landowners were recruited as middlemen, buyers and ginners by the Russians after early attempts to institute the plantation system had failed.
>
> " Thus, although the economy changed rapidly from one which was self-sufficient in food products to a one-crop system, the area under American types of cotton rising from 750 acres in 1884 to 160,000 in 1890, the bey–dekhkan relationship was strengthened for the independent peasantry rapidly lost most of their land under the usurious terms of credit, and became share-croppers of the type described above. As in the American South, share-cropping and credit to an illiterate peasantry resulted in very little actual cash ever coming into the cropper's hands." [1]

However, the facts that the peasants were still working, at any rate directly, for men of their own race and creed, that they hated the Russian conquerors, and that many still possessed their own plots of land, however small, induced stability into the economic and social structure. The same writer continued:

> " However, the Central Asian system was distinctive and more stable because the bulk of the croppers were neither slaves nor entirely landless. Generally, they retained the plot on which their home was built and their own wooden plough and working animal. As a result, their sense of property, bound up with their feudal and religious loyalties and the fact that they continued to

[1] *The Soviet Far East.*

work for a member of their own nationality and in a form of labour hallowed by tradition, created a firm wall of resistance to change."

Taken by and large, the lot of the natives was hard under the Khans, but it became still more arduous under the new conquerors. Several revolts broke out after the conquest of these territories, but they were easily and cruelly put down.

Just as Eastern potentates were invited to the capitals of Europe on certain ceremonial occasions, so the Emir of Bukhara was invited to St. Petersburg for, of course, the same purpose. A. Polovtsoff relates:

> " Besides Kermineh, there is a glaringly modern palace called Shir-Boodoon just outside Bukhara. A number of momentoes which the Emir collected during various journeys to Russia are housed there. One of the rather startling ones is an old railway car stuck in the middle of a vast hall. It is the car which was put at his disposal when he first came to St. Petersburg, and which he expressed a desire to keep as a souvenir, the Emperor, of course, laughingly assenting.
>
> " Later on, when the new railway line which linked his country through Orenburg to Russia was completed, he was given a large saloon car lacquered in cherry-red and ornamented with reproductions of his Order of the ' Star of Bukhara ', so that railway officials should know what an exalted passenger was inside. He was immensely proud of this imperial gift." [1]

The Tsarist Government not only helped the Emir against his own people, it understood also how to flatter his vanity.

It was not until the local Russian workers organised the native workers and peasants that an effective fight was put up against the common oppressor—i.e. the Tsarist Government.

The Tsarist Government, like the other European imperialist Powers of the 19th century, was much too clever to offend the religious susceptibilities of the Moslems. The Russians built several railways in Central Asia, but they were deterred by the hostility of the native population from building a railway station in the city of Bukhara, known throughout the East as " Bukhara the Holy ". A. Polovtsoff wrote:

> " When at last it was doomed; when nothing more was of any avail to secure it from being defiled by that invention of the

[1] *The Land of Timur.*

devil, the fire-spitting machine—even then the mischief-mongers did not dare to treat the holy city as was their wont. Its radiance cowed and subdued them. Their sacrilegious hands hesitated at the eleventh hour and were compelled to halt at a respectful distance from the venerable walls. As a matter of fact the Russian Government was apprehensive of stirring up the religious fanaticism of the crowd and therefore decided not to carry the railway line up to the actual precincts of the town." [1]

Under the Khans women went about veiled, and this continued under Tsarist rule. A. Polovtsoff wrote:

"Womankind never goes about unveiled, the veil being of horsehair, dense and stiff like cardboard, nor without the shroud of a grey cloak worn over the head, the sleeves dangling empty; so that in the street all ladies look alike, and go about as if clad in boxes." [2]

Apparently when Mr. Polovtsoff visited Turkestan the old adages "the unchanging East" and "East is East and West is West and never the twain shall meet" still held good, because, writing from Bukhara, he stated:

"It is the Western onlooker who is out of place; what he sees is all exactly as it was centuries ago; the simple scale of human relationships, which is the foundation-stone of the life he surreptitiously partakes of, has never been altered and is the same as in the Arabian tales. By peering very closely, he may notice that many robes and turbans are no longer hand-woven, and he may then remember that there is actually a railway station some miles away. However, those are details of no importance which do not go deep below the surface of things. For the true essence of 20th-century Bukhara is the same as that of Sindbad the Sailor and all the numerous Kalendars." [3]

In later chapters we shall see that "the unchanging East" was a myth, that East has met West with benefit to both, and that Sindbad, if he could return, would feel as strange in Tashkent as he would in London.

Russian Turkestan has been truly described as a mosaic of nationalities, tribes, religions, customs and languages. As we have already

[1] *The Land of Timur.* [2] Ibid. [3] Ibid.

related, the territory has been conquered and re-conquered, and the flotsam and jetsam of, amongst others, Mongolians, Tatars, Jews, Christians, Russians and Ukrainians had been left behind as the tides of invasion and liberation flowed and ebbed. The majority of the inhabitants, however, were Kazakhs, Uzbeks, Tadzhiks, Kirghizians and Turkomans.

At the time of the Russian conquest the boundaries of the Khanates by no means conformed to ethnographical principles. Due to constant wars between the different peoples and the re-tracing of frontiers, there were considerable pockets of other nationalities in each Khanate. The Tsarist Government, in delineating the frontiers, deliberately made this situation more complicated in order to incite one nationality or tribe against another, and thus make a common struggle of the native people against the foreign conquerors more difficult of attainment. "Divide and rule" was one of the golden principles of Imperialism in Russian Turkestan, as well as in India, Africa and elsewhere. N. Mikhailov describes the gerrymandering of the boundaries thus:

> "The Tsarist legislator sketched the internal boundaries on his map, purposely dividing national and economic units in order to make them more easy to govern. He cut up the living body of the country. He cast a net, woven out of the frontier lines, over Central Asia, which was inhabited by several nationalities.
>
> "The frontier line divided the Kirghizes, some of whom found themselves in the Turkestan province, others in the Steppe province—both under the rule of different governor-generals.
>
> "The Bukhara Protectorate and the vassal State of Khiva cut into Russian Turkestan: they were playthings of geography, retaining their formal independence, and inhabited by the same peoples as the neighbouring Russian possessions.
>
> "The boundary between Bukhara and the Turkestan province in the Kzyl-Kum desert was laid down in such a way as to provide the route taken by the Russian troops, when they were attacking Khiva, with a sufficient quantity of wells.
>
> "The boundary cut right through the Zeravshan valley, and, traversing the only irrigation system, gave the upper parts of the Zeravshan to Russia and the lower parts to Bukhara. Russia took possession of the water, i.e. the power.
>
> "The Uzbeks, who lived on the banks of the Zeravshan, were

artificially separated; whilst in Khiva the boundary united the Uzbeks and the Turkomans.

"Nationalities were divided and purposely joined to each other. Thus enmity and oppression between different nationalities were created." [1]

Russian Turkestan was Balkanised, but in this case the process was the work of one great Power, and not several, and, as we shall see in subsequent pages, the Soviet system found a solution to a problem which has as yet not been resolved outside the frontiers of the U.S.S.R.

The colonisation of Central Asia with Russian peasant and Cossack settlers proceeded very slowly at first, and only started on a fairly big scale in the nineties of the last century. As Central Asia was, to speak euphemistically, "pacified", its economic development and the institution of capitalist forms of production and organisation gradually took the place of the former feudal slave and patriarchal forms, but this process had not been completed when the Soviet Revolution occurred and triumphantly and rapidly swept away all forms of enslavement and exploitation.

A beginning was made by the Tsarist authorities to study the natural resources of Central Asia, and copper, graphite, lead and coal were discovered. Towards the end of the 1860's coal-mining was started, and later also oil was extracted. To facilitate the economic development, a beginning was also made with the construction of railways. In 1880, to facilitate the conquest of Turkmenia, a line was started between the Mikhailov Straits on the eastern shores of the Caspian and Kzyl-Arvat. Subsequently, when Merv had been annexed, the line was continued to Ashkhabad, then to Merv, and in 1888 it was extended to Samarkand. This railway was of immense importance. In the first year after its completion exports from Turkmenia to Russia increased nearly nine times, and imports from Russia five and a half times. Central Asia became a great market for Russian exports and an important source of raw material for Russian manufacturers.

But native handicraftsmen were ruined; some of the finest of the native handicrafts were almost stamped out in order to make room for manufactures made in Russia.

As time went on raw cotton became more and more the chief article of export, and Central Asia became the chief source of raw cotton for the Russian textile industry. At the same time a small

[1] *Soviet Geography.*

industrial working class—mainly Russian—arose from those working on the railways, in the oil-fields and in cotton-ginning.

In general, it may be said that although like other imperialist Powers, using Central Asia entirely for the benefit of her own capitalist and landowning classes, and crushing every manifestation of native culture and independence, nevertheless, in so far as Russian penetration broke up the old order, it did to some extent pave the way for further progress.

An end was put by the Russians to the constant feudal wars between the various Khans and Emirs which were ruining and devastating the land. In the sixties and seventies slavery was abolished, although, as we have seen, this did not benefit the dekhkans. This, however, did not prevent Tsarist Russia from standing invariably on the side of reaction in Central Asia. The Tsarist Government not only did not assist but placed obstacles in the way of the industrial and general economic and cultural development of these territories, and it put down with an iron hand every manifestation of any progressive movement.

There were many quite serious risings in Samarkand in 1868, in Kokand in 1875–76. Between the years 1887 and 1890 there were 185 revolts or attacks on Tsarist officials and merchants' offices and stores; in 1891–94, 189, and in 1895–98, 294. Among the most serious of the risings of the 19th century were those in Ferghana in 1885 and in Samarkand in 1892.

There was little improvement in the economic and political conditions of the native in the 20th century. The peoples of Russian Turkestan had even fewer political rights than those of European Russia. For instance, they were not even permitted to elect representatives to the short-lived and ill-fated Duma. The Tsarist rule had no genuine roots in these areas. " The word ' Britain ' to the native Colonial peoples," writes George Padmore,[1] " like the word ' Russian ' to the former subject peoples of Tsarism, was synonymous with ' oppressor '."

But even in the most backward of suppressed native peoples there is a vague national consciousness which a particularly unwise and oppressive act on the part of the dominating Power will often cause to express itself in a manner which nothing can afterwards obliterate from the hearts and souls of the people. Such a stupidity was committed by the Tsarist Government in June 1916.

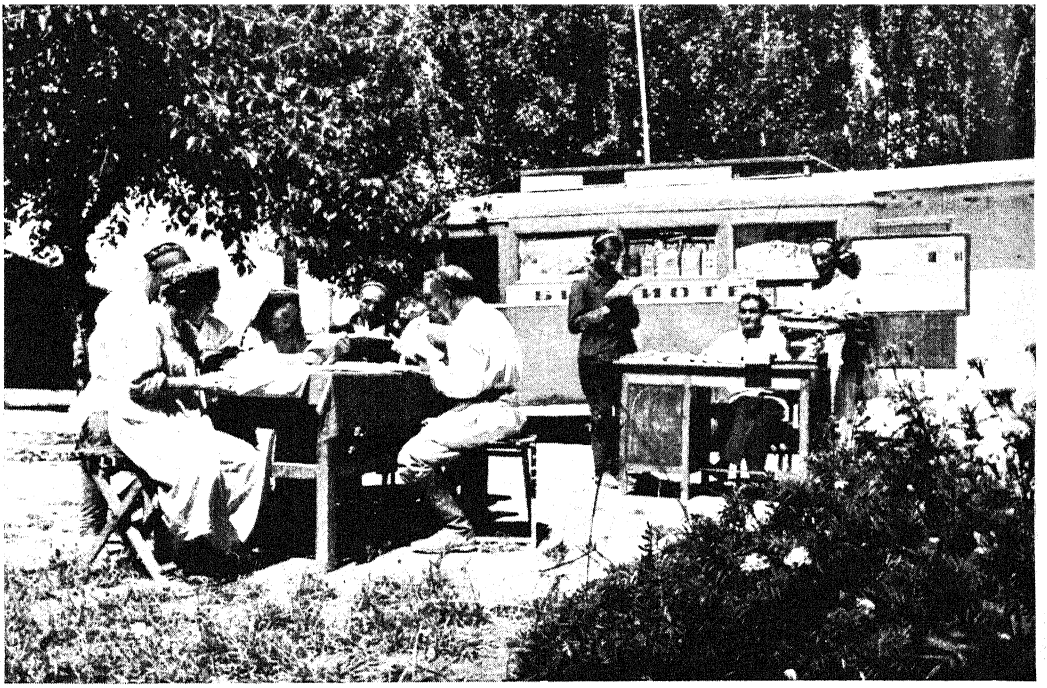
[1] *How Russia Transformed her Colonial Empire*, Dennis Dobson, Ltd.

The Russian armies on the German–Austrian front had suffered appalling casualties due to their poor equipment and antiquated transport. The rumblings of revolution were already distinct, and were even heard in Government circles. The authorities had not dared to extend conscription to the natives of Russian Turkestan, because they feared, and with adequate reason, that the rifles might be used against Tsarist rule. However, the Russian losses had been so tremendous that they resolved to take the desperate step of mobilising these native peoples for work behind the lines. In June 1916 the Tsar issued an edict for the mobilisation of the Colonial peoples of Russia, and Central Asia was to provide 250,000 men of from nineteen to forty-three years of age. The authorities might surely have been expected to realise that the month chosen was bound to call forth the maximum of opposition, because in that month in Central Asia and southern Russia all is being set for gathering in the harvest, and the peasants and their families knew only too well what an ungathered bad harvest meant to them. Whoever had plenty to eat, the peasants would go hungry. This, of course, was only part of the reason for the opposition to the Tsarist edict. The natives of Turkestan had no desire to risk their lives for a hated foreign tyrant.

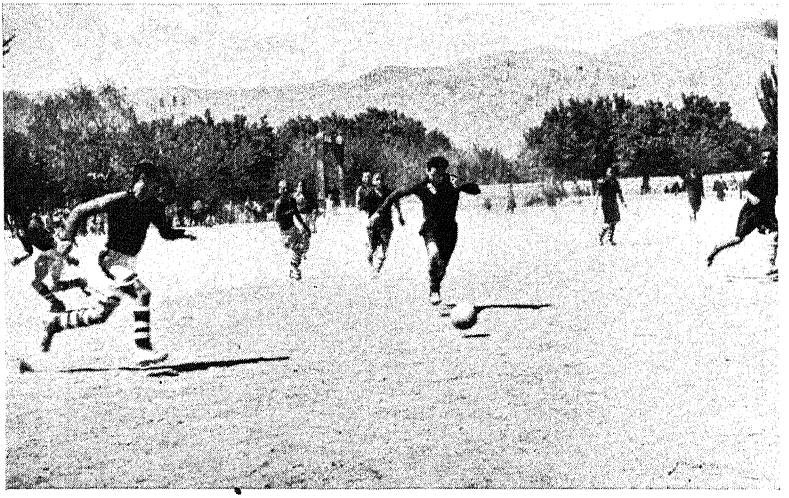
A storm of rage and defiance swept the plains, valleys and uplands of Central Asia. A spontaneous rebellion broke out in July 1916, in which not only the resisting men fought, but which was supported in one form or another by the majority of the native peoples. The first to rise were the peoples of Uzbekistan and Kazakhstan, and the resistance of the people was particularly strong in the Turgai area (present Aktyubinsk region of Kazakhstan). Here the rising was led by Amangeldy Imanov. The Governor-General of Turgai himself came to persuade the Kazakhs to obey the decree, and the following incident is related: Imanov, addressing the Governor-General, asked, "May I, honoured Governor, put one question to you: in our ignorance we do not understand whom it is that we shall be called upon to defend in the war?" The Governor-General did not stop to argue. He immediately ordered Imanov's arrest, but he vanished among the crowd of Kazakhs, who hid him; Imanov continued to lead the Kazakh revolt, and later in 1917 he participated in the revolution, in the defence of which he was killed.

Four months of strenuous effort and fighting were required to suppress the rebellion, which was accompanied and followed by a terror so cruel that a million nomads fled across the frontier into Sin-

An Uzbek girl research worker at an industrial laboratory in Tashkent.



Travelling libraries satisfy the collective farmers' growing demand for books of all kinds. This one is visiting the "Voroshilov" Collective Farm in Tadzhikistan.



Collective farmers *v.* "Spartak". A match at a village football ground near Leninabad, Tadzhikistan.

kiang. True, the revolt was put down, but the Tsar succeeded in mobilising only 120,000 workers instead of the 250,000 which he had hoped to get. That in itself was a partial victory for the native peoples. The revolt had many effects and an importance not realised at the time. It awakened and strengthened the national assertiveness of the peoples of Central Asia, it weakened the Tsarist structure and contributed its share to the revolution which swept all Russia in the following year. Even that was not all; it predisposed the native peoples against the Russian " Whites " and in favour of the Soviets in the subsequent Civil War. It has been said that backward peoples have few ideas, but that they have strong memories for fundamentals. The Russian " Whites " could not rally them to their side after the November Revolution. The events of 1916 had left an indelible impression on the tablets of their memories. " Forget the past " is an old slogan of imperialists when they are in difficulties. The healthy reply of the victims often is, " Not till wrongs are righted ".

The Provisional Government, formed after the March (1917) Revolution, and which lasted until November 7, 1917, held very similar views regarding the place which colonial peoples should occupy in the scheme of things as were held by the Tsarist Government. They did not make any fundamental changes. Mr. William Mandel relates:

> " This was demonstrated most flagrantly in the native State of Bukhara, where the Provisional Government even permitted the Tsarist ' adviser ', Miller, to retain his position, and contented itself with sending a dispatch to him and the autocratic Emir urging democratic reforms.
>
> " In Kirghizia, the seizure of native lands, cattle and property continued.
>
> " The new governments in Turkestan and the Steppe consisted of a melange of officials of the Tsarist resettlement administration, Russians and native merchants, native elders and well-to-do Russian farmers. Neither the Russian railway workers, who desired a socialist regime, nor the soldiers stationed in the Central Asian garrisons, who were suffering from the food shortage, nor the poorer and particularly the more recently-arrived peasant settlers, were satisfied by this transfer of power from the more distant to the more immediate oppressor. As for the native majority of the population, the situation had changed only in that the new administration used gentler words."

However, Kerensky and his colleagues were no more able to stay the march of events in Central Asia than in the rest of Russia. Here also, side by side with the organs of the Provisional Government, Soviets of Workers and Soldiers Deputies sprang up, and the appeal " All power to the Soviets " found a ready and powerful response.

In fact, even the November Revolution was anticipated. On September 12, 1917, the Soviets in Tashkent took power. The uprising was premature, and was suppressed by the forces of the Provisional Government. However, two months later the Soviets were back in power after a bitter fight lasting several days. This victory was rendered doubly significant by the fact that Russian soldiers and settlers fought side by side with Tashkent workers and peasants from the surrounding villages. This was not the end. It was little more than the beginning of the struggle for power between the Soviets and the local reactionaries in Central Asia.

We shall deal with this subject at greater length in the next chapter.

CHAPTER V

AFTER THE MARCH AND NOVEMBER (1917) REVOLUTIONS

THE Provisional Government, formed under Prince Lvov and later under Kerensky, as we mentioned in the previous chapter, left things in Turkestan pretty much as they were before. The Soviet *History of the Civil War*[1] states:

> "The February bourgeois-democratic revolution brought no change in the conditions of the nationalities in Central Asia—the Uzbeks, Kazakhs, Kirghiz, Tadzhiks and Turkmenians.
>
> "In April 1917 the Provisional Government sent to Turkestan the so-called Turkestan Committee, headed by the Constitutional Democrat, Shchepkin, an ex-member of the State Duma. This Committee was to act as the supreme authority in the region.
>
> "After the coalition Provisional Government was formed, the composition of the Turkestan Committee was slightly changed, and the Mensheviks instead of the Constitutional Democrats predominated in it; but its policy remained the same."

Also, as mentioned in the previous chapter, the struggle of the Bolsheviks for power in European Russia was paralleled in these Provinces, but with an added important complication: the struggle of the bourgeois nationalists who wanted a greater share in government, but were against the establishment of the Soviet Power. The *History* continues:

> "In its counter-revolutionary dealings the Turkestan Committee relied not only on the Mensheviks, Socialist-Revolutionaries, former Tsarist officials and White guards, but also on the bourgeois-nationalist organisations, Shuro-Islamia and Uleme, which came into existence in March 1917.
>
> "Shuro-Islamia was the party of the Uzbek nationalist bourgeoisie, while Uleme was the party of the Mohammedan clergy, the semi-feudal landlords and the nationalist big bourgeoisie.

[1] *Official History of the Civil War in the U.S.S.R.*

These two organisations repeatedly expressed their loyalty to the Provisional Government."

Small wonder that the "Turkestan Committee" was unable to solve any of the fundamental questions facing the Provinces. To quote again from the *History*:

> "The Turkestan Committee failed to solve any of the fundamental problems raised by the revolution. National oppression continued as before, merely assuming, as Stalin pointed out, a new, more insidious and, therefore, more dangerous form.
>
> "Nor was the agrarian problem solved; and conditions of the industrial workers remained the same as they had been before the revolution. In September 1917 a working day of 12 hours prevailed in Turkestan, whereas in all other parts of the country the eight-hour day had already been won."

However, despite the cultural backwardness of the native peoples as a whole, many of the peasants and urban workers who, as recorded in a previous chapter, had been conscripted for work behind the lines, returned to Turkestan as the Imperial Army broke up, bringing with them revolutionary ideas which they had learned in European Russia. Uneducated though these people were, many of them realised that their real interests lay in union with the workers and peasants of Russia, and not in unity with their native ruling class. It was they who formed the "Leagues of Mohammedan Working People", which played a decisive role in subsequent developments in these areas. The *Official History* states:

> "In March 1917 the first Mohammedan labour organisation was formed in Skobelev (now Ferghana). Later, similar organisations were formed in Tashkent, Samarkand, Kokand, Margelan, Katta-Kurgan, Khodzhent, and other towns. In most cases, these leagues were formed by workers and poor peasants who, in 1916, had been mobilised by the Tsarist Government for work behind the lines. On returning to Turkestan they formed themselves into an inaugural group of demobilised workers and issued a call for the formation of Labour Leagues. In this call they declared that their object was 'to form a family of workers consisting of poor peasants and working people, of Tatars and Sarts, which would reinforce the working class in its struggle against capital

and help to create a new society based on truly democratic principles.'

" Many of these demobilised workers and dekhkans (peasants) had obtained a thorough revolutionary schooling in Russia and were connected with the Bolshevik Party and the Russian workers."

At first only isolated groups of Bolsheviks existed in Tashkent, Samarkand, Perovsk, New Bukhara and other towns, and they belonged to the still-existing groups of the former United Russian Social-Democratic Labour Party,[1] which was dominated by the Mensheviks, who, in their turn, were loyal to the Provisional Government. After the defeat of the Kornilov rebellion (September 1917) in European Russia, a revolutionary wave swept through Turkestan, and the influence of the Bolsheviks grew rapidly with the native peoples as well as with the Russian workers in the towns and on the railways.

The Russian troops stationed in these areas also played an important role.

" After the Kornilov mutiny was suppressed the revolutionary struggle of the working people of Turkestan entered a new phase. In September 1917 strikes frequently broke out among the cotton-workers, oil-press workers and soap-makers, who demanded higher wages and an eight-hour day. Strikes occurred in Tashkent, Samarkand, Namangan, Andizhan, Katta-Kurgan and New Bukhara.

" In the rural districts the agrarian movement developed into a struggle for land and irrigation water.

" The revolutionary movement grew also in the army, particularly in the Tashkent garrison.

" The most striking symptom of the growth of the revolutionary crisis, however, was what are known as the ' September events ' in Tashkent.

" After the suppression of the Kornilov mutiny the Bolsheviks intensified their work under the slogan of ' All power to the Soviets ! ' " [2]

[1] In 1912, the Bolsheviks had expelled the Mensheviks from the United Social Democratic Labour Party, but in isolated parts of the country small groups still went by that name.

[2] *Official History of the Civil War in the U.S.S.R.*

In the previous chapter we referred to the revolt of the Tashkent Soviet in September 1917, which was suppressed by the Provisional Government; they had the leaders arrested just as they arrested the Bolshevik leaders in European Russia, but so strong was the local opposition, including that of the troops stationed there, to this action, that the Provisional Government had to release the arrested leaders almost immediately. This was the beginning of the end of the control of the Provisional Government in Turkestan. On October 31 the Tashkent Soviet, by eighty-nine votes against four, with six abstentions, accepted a Bolshevik resolution in favour of the transfer of " all power to the Soviets ".

Tashkent was won for the Bolsheviks, and this was no ephemeral victory, because immediately after the establishment of the Soviet Power in Petrograd the call for a Central Government to transfer all power to the Soviets found a ready response in Tashkent. The struggle lasted for several days, but by November 13 the Soviet Power was established in Tashkent. This, however, did not mean the consolidation of the Soviets throughout Turkestan; a long and stubborn struggle still lay ahead.

Before proceeding farther we shall explain the attitude of the Bolshevik Party on the subject of the Colonial Peoples.

The Party thesis on this subject, prior to the revolution, stated:

" (*a*) The world is divided into two camps: the camp of a handful of civilised nations which possess finance capital and exploit the vast majority of the population of the globe, and the camp of the oppressed and exploited peoples of the colonies and dependent countries that comprise that majority.

" (*b*) The colonies and the dependent countries, oppressed and exploited by finance capital, constitute an enormous reserve power and a most important source of strength for imperialism.

" (*c*) The revolutionary struggle of the oppressed peoples in the dependent and colonial countries against imperialism is the only road that leads to their emancipation from oppression and exploitation.

" (*d*) The principal colonial and dependent countries have already entered on the path of the national liberation movement, which is bound to bring about a crisis in world capitalism.

" (*e*) The interests of the proletarian movement in the advanced

countries and of the national liberation movement in the colonies require the fusion of these two aspects of the revolutionary movement into a common front against the common enemy, imperialism.

" (*f*) The victory of the working class in the developed countries and the liberation of the oppressed peoples from the yoke of imperialism are impossible without the formation and the consolidation of the common revolutionary front.

" (*g*) The formation of a common revolutionary front is impossible unless the proletariat of the oppressor nations renders direct and determined support to the liberation movement of the oppressed peoples against the imperialism 'of its own country', for 'no nation can be free if it oppresses other nations' (Marx).

" (*h*) This support implies the advocacy, defence and realisation of the slogan of the right of nations to secession and to independent political existence.

" (*i*) Unless this slogan is put into effect, the amalgamation and collaboration of nations within a single world system of economy, which constitutes the material basis for the victory of socialism, will be impossible.

" (*j*) This amalgamation can only be a voluntary one and must be based on mutual confidence and fraternal relations between the nations." [1]

This analysis and programme for action was thought out and elaborated long before 1917, and it was much more than a political programme, as these words are understood in western Europe. This thesis was not a mere speeding up of an old development. It was a complete and fundamental break with the past, the death-knell of Russian Imperialism. The world had hardly caught its breath after the historic events of November 7, 1917, in Russia, when the Soviet Government left it gasping for a second time by a new epoch-making proclamation. This was the famous " Declaration of Rights of the Nations of Russia ", issued November 15, 1917, which read as follows:

" The October Revolution of the workers and peasants has commenced under the common banner of emancipation.

" The *peasants* have been emancipated from the power of the landlords, for landlordism no longer exists; it has been abolished. The

[1] J. Stalin, *Marxism and the National and Colonial Question.*

soldiers and *sailors* have been emancipated from the power of the autocratic generals, for henceforth generals will be elected and be subject to dismissal. The *workers* have been emancipated from the caprice and tyranny of the capitalists, for henceforth the factories and works will be under the control of the workers. All that is vital and virile is being emancipated from its hated fetters.

" There remain only the *nations in Russia* which suffered, and are still suffering, oppression and tyranny, whose emancipation should commence immediately and whose liberation should be brought about resolutely and for ever.

" In the epoch of Tsarism the nations in Russia were systematically incited against one another. The results of this policy are common knowledge: massacres and pogroms on the one hand, and the slavery of the nations on the other.

" This disgraceful policy of incitement has been abolished, never to be revived. Henceforth, its place will be taken by a policy of *voluntary and sincere* alliance of the nations in Russia.

" In the period of imperialism, after the February Revolution, when power passed to the bourgeoisie represented by the Constitutional Democratic Party, the naked policy of incitement gave way to the craven policy of sowing mutual distrust among the nations in Russia, a policy of pinpricks and provocation covered up by glib talk about 'freedom' and 'equality' of nations. The results of this policy are common knowledge. Growth of national enmity and mutual distrust.

" This despicable policy of falsehood and distrust, of pinpricks and provocation, must be brought to an end. Henceforth, it must be replaced by an open and honest policy that will lead to *complete mutual confidence* among the nations of Russia.

" Only as a result of such an alliance can the workers and peasants of the different nationalities in Russia be merged in a single revolutionary force capable of repelling every attack on the part of the imperialist-annexationist bourgeoisie.

" On the basis of the above propositions the First Congress of Soviets, in June this year, proclaimed the right of the nations of Russia to free self-determination.

" In October this year the Second Congress of Soviets reaffirmed this inalienable right of the nations inhabiting Russia in a more emphatic and definite form.

" Fulfilling the will of these congresses, the Council of People's

Commissars had decided to base its work in relation to the nationalities of Russia on the following principles:

" 1. Equality and sovereignty of the nations of Russia.
" 2. The right of the nations of Russia to free self-determination, including the right to secede and form independent states.
" 3. Abolition of all and sundry national and national-religious privileges and restrictions.
" 4. The free development of the national minorities and ethnographical groups inhabiting the territory of Russia." [1]

This proclamation, drawn up by Stalin, bore the names of Lenin as Chairman of the Council of People's Commissars, and Stalin as Commissar for Nationalities. " These four points," states *The History of the Civil War*, " summed up the programme of action on the National Question of the first Proletarian State in History." It was a proud but justifiable boast.

This Declaration was followed on December 5, 1917, by a manifesto addressed " To All the Toiling Mohammedans in Russia and in the East ". This document, which also bore the names of Lenin and Stalin, read:

" Comrades! Brothers!

" Great events are occurring in Russia. The bloody war which was launched for the purpose of dividing up foreign countries is drawing to a close. The rule of the pirates who have enslaved the peoples of the world is tottering. Under the hammer blows of the Russian revolution, the ancient edifice of bondage and slavery is being shattered. The world of tyranny and oppression is living its last days. A new world is being born, a world of the working people and of those who are being emancipated. At the head of this revolution marches the workers' and peasants' government of Russia, the Council of People's Commissars. . . .

" The reign of capitalist plunder and violence is crumbling. The soil is burning under the feet of the imperialist robbers.

" In the midst of these great events we address ourselves to you, toiling and dispossessed Mohammedans of Russia and the East.

" Mohammedans of Russia, Tatars of the Volga and the Crimea, Kirghiz and Sarts of Siberia and Turkestan, Turks and Tatars of Transcaucasia, Chechens and Gortsi of the Caucasus, all those whose mosques

[1] *The History of the Civil War in the U.S.S.R.*

and prayer-houses were destroyed and whose religion and customs were trampled upon by the Russian Tsars and tyrants!

"Henceforth, your faith and customs, your national and cultural institutions, are proclaimed free and inviolable. Build up your national life freely and unhindered. This is your right. Be it known to you that your rights, like the rights of all the nationalities of Russia, are protected by the full might of the Revolution and of its organs, the Soviets of Workers', Soldiers' and Peasants' Deputies.

"Support this Revolution and its authorised Government."

Many Russians—Tsarists, Liberals, Mensheviks and others—as well as the majority, if not all the foreign diplomats, and many observers in Russia at the time, were convinced that this policy was insane, that it would hasten the downfall of the Soviet Power, would spell the rapid disintegration of Russia and the end of the State as a mighty world Power. They were wrong—completely wrong—on all counts, as we shall demonstrate in later pages.

Following on the November (1917) Revolution, the course of events in Turkestan—apart from the Khanates of Bukhara and Khiva—were not very dissimilar from those enacted in European Russia. We used the words "not very dissimilar" advisedly, because not only were these provinces more economically and culturally backward, but among the native people there was a deep-rooted suspicion of everything Russian. Moreover, the proletarianised section was smaller than in European Russia.

The counter-revolution raised its head more easily far from the centre, although in this particular case it was at first short-lived.

> "The *Autonomous Government in Turkestan,* headed by Tanyshbayev, Shagi-Akhmetov and Chokayev, was formed in opposition to the Tashkent Council of Peoples' Commissars at what was called a Pan-Mussulman Congress convened by bourgeois nationalist organisations in November 1917 in Kokand (hence the term 'Kokand autonomy'). With the support of Russian White guards, this government started civil war in Turkestan, but was overthrown in February 1918 by Tashkent and Samarkand Red Army divisions."[1]

That might well have been the end, or well-nigh the end, of the counter-revolution in Central Asia, had it not been for the criminal and futile policy of armed intervention in Russia which the then

[1] J. Stalin, *Marxism and the National and Colonial Question.*

Allied Governments immediately commenced, and which continued for four years. Great Britain played a most important role in this policy in Central Asia.

The British Consul-General in Chinese Turkestan, Lieut.-Colonel Etherton, lost no time in establishing contact with the anti-Bolshevik forces. He later wrote:

> "The Bolshevik Government in Tashkent . . . were confronted by the British in north-east Persia, and were meeting with strong opposition from insurgent bands in Semiretchia and Ferghana, with all of whom I was in touch." [1]

Etherton's record of events is supported by that of Lieut-.Colonel Bailey, who, in his *Mission to Tashkent*, gives an account of a mission he (Bailey) led to Tashkent in Russian Turkestan in 1918 during the "intervention period".

An armed invasion of Turkestan was also attempted. A combined Menshevik and social-revolutionary Government was set up at Ashkhabad by a small Anglo-Indian force commanded by General Malleson. This force had advanced from Meshed (Persia) into Transcaspia. The puppet Government duly sanctioned the fight of the forces under Malleson against the Bolsheviks in Turkestan. Malleson succeeded in taking Merv, but failed to occupy Tashkent and to subjugate Bukhara and Khiva.

The troops under Malleson were assisted by another expeditionary force under Major-General Dunsterville, who advanced from Bagdad to Enzeli, on the Persian shores of the Caspian. On August 16, 1918, he landed at Baku, but was driven out a month later, and returned by sea to Persia, where he remained. Thanks to the military help which he got from the Russian "White" leader, General Denikin, the Caspian fleet fell into his hands, and the southern Caspian remained under British control for some time.

In April 1918 Turkestan was declared an autonomous republic within the Russian Soviet Federal Socialist Republic (R.S.F.S.R.). The Khanates of Bukhara and Khiva were not interfered with by the Soviet Power.

The counter-revolution again raised its head, thanks to the assistance just referred to, when the "White" Armies under Koltchak, Denikin and Yudenitch advanced towards Moscow and Petrograd in 1919. On the other hand, as these forces retreated, so, as elsewhere, the

[1] Lieut.-Colonel Etherton, *In the Heart of Asia.*

" Whites " lost ground in Turkestan. For a time the Soviet forces in Tashkent were cut off from contact with the Red Army in Siberia.

The authors in another work dealing with the Civil War in Siberia and Turkestan related:

> " During September 1919 the Soviet Forces on the Koltchak front met with both successes and reverses. On the 11th of that month the whole of Koltchak's Southern Army numbering about 20,000 men, with full equipment, artillery, baggage, field hospitals, money and workshops, in the neighbourhood of Aktiubinsk-Orsk, surrendered to the Red Army. In that region in a mere week the Soviet Forces captured in all 45,000 prisoners. This series of victories was of great value to the Soviet Government as it made possible a junction of their forces with the Tashkent Army group, thus uniting with Soviet Russia an enormous territory rich in raw materials.
>
> " The Red Army advance in Siberia rapidly developed, and in addition, on October 21, 1919, the Moscow wireless announced that in Turkestan as far south as 106 miles south of Lake Balkhash and also 27 miles north-west of Iletsky-Gorodok the Red Army had inflicted severe defeats on the ' White ' forces and that the latter were retreating in disorder. These victories sealed the fate of Koltchak's forces in Turkestan.
>
> " By the middle of November 1919 the ' White ' forces in Turkestan had also been decisively beaten and regular communications had been re-established between that vast region and Moscow." [1]

In the Urals region, the Red Army, in the course of its operations against Koltchak, made a bold move. It sent one of its sections to the south in the direction of Turkestan; in the course of about three months these troops had penetrated into the Transcaspian region, and on February 6, 1920, captured Krasnovodsk, on the Caspian. This enabled the Bolsheviks to set up a Soviet Government without delay.

As already mentioned, the two Khanates of Bukhara and Khiva had been left undisturbed by the Soviet Power, but the defeat of the " Whites " gave a considerable impetus to radical elements whose aims were more or less similar to those of the " Young Turks ". In the spring of 1920 the peoples of Khiva arrested and deposed the Khan and handed him over to the Russians for internment. The revolution-

[1] W. P. and Zelda K. Coates, *Armed Intervention in Russia* (Gollancz).

ary Government was centred at Khorezm, and often afterwards this new Republic, which was coterminous with Khiva, was referred to as Khorezm. In passing, we may remark that Khorezm was the medieval name of this Khanate.

In Bukhara a young Bukharan party had been formed before the first World War, and insurrections led by this party broke out in 1910 and 1913 against the Tsarist representative—the local Emir. At the outbreak of the first World War in 1914 the Young Bukharans did not hide their anti-Tsarist sentiments. On the contrary, as a symbol of what they hoped would be the fate of the Tsardom as a result of the war, they burnt a big bull in the streets of Samarkand.

After the March 1917 Revolution a delegation of Bukharan merchants petitioned Kerensky (who became Prime Minister on August 6, 1917) to abolish the Emirate, but Miliukov, the then Foreign Secretary, objected to anything of the kind. This resulted in encouraging sympathy among the Young Bukharans for the Bolsheviks.

Although in the first stages of the Soviet revolution the Moscow Government had no contact with Bukhara, the defeat of the counter-revolutionary forces in Siberia and Turkestan (1919–20) and the expulsion of the British interventionists greatly encouraged the Young Bukharans to sharpen their struggles against the Emir. In September 1920 an insurrection broke out, and after only three days' struggle the Emir was forced to flee to Afghanistan. There he was said to have set up in Kabul as a merchant in karakul fleeces.

The two new Republics thus formed constituted themselves Peoples' Soviet Republics, but not Socialist Soviet Republics. Broadly speaking, the radical elements in both wanted to break the power of feudalism and establish bourgeois governments.

Long before his overthrow, which he himself realised he was powerless ultimately to prevent, the Khan (or Emir) of Bukhara contacted the British Consul-General in Chinese Turkestan, Lieut.-Colonel Etherton, in the hope of saving his immense fortune with British aid.

Etherton relates:

> " He (the Emir) therefore made secret preparations in view of the potential crash, and tentative arrangements to save the vast amount of treasure lying in the vaults of his palace, a fortune that had been amassed by himself and his predecessors. He was one of the wealthiest men in Asia, such riches as take one back to the days of the Arabian Nights, whilst the collection of jewels

and precious stones was worthy of the oldest Mohammedan state." [1]

The Khan begged the British representative to take charge of this treasure.

> " To secure the safety of his wealth, totalling thirty-five million pounds sterling in gold and silver coins and ingots, he offered to confide it to our care, and requested us to take charge of it pending the dawn of brighter days and a return to normal conditions."[2]

However, Etherton was apparently as powerless as the Khan and, much to the regret of both, nothing was done.

> " In view of all the circumstances and the isolated nature of Bukhara, surrounded as the state was by warring elements, quite apart from political reasons, we were unable to take custody of the treasure. Certainly, so far as Kashgar was concerned, I could not have accommodated so large an amount in my treasury without special arrangements, and, moreover, the difficulties of getting it there would have been insuperable. So the wealth of the Bukharan Emirs remained in its vaults." [3]

Although the Khan had to leave his immense riches behind, it is on record that he succeeded in taking with him " his female and boy harems ". We mention the fact because it throws a world of light on the moral corruption of the rulers of Central Asia at that time.

To return for a moment to the ex-Khan of Khiva—as already mentioned, he was at first interned on the territory of the R.S.F.S.R. Later, when order was restored in Khiva, the Government of the R.S.F.S.R. proposed to the Government of Khiva that he should be taken back to that State, but the Government of Khiva opposed the proposition. In 1922 he was released, and, in agreement with the Khiva Government, he was given an allotment of land in the Yekaterinburg Province, which he cultivated in complete freedom.

The Khans were overthrown, but this was only the first chapter. Within the two new Peoples' Soviet Republics and throughout the whole of Russian Turkestan a long and complicated struggle followed between Feudalists, Nationalists and adherents of the Soviet Power.

Broadly speaking, the Feudalists wanted to maintain the old social

[1] *In the Heart of Asia.* [2] Ibid. [3] Ibid.

system, with all the privileges of the beys. The Nationalists wanted to curtail the power of the Khans and to establish free enterprise. Both wanted political independence. The Bolsheviks aimed at the establishment of Soviet power and collaboration with the R.S.F.S.R. Although the Feudalists and Nationalists, like their counterparts in other countries, had their differences, even profound ones, they not infrequently united their forces against the Bolsheviks.

The struggle of the latter was exceedingly difficult, because the literate sections of the population, owing to the past history of these regions, were in the ranks of their opponents. In addition, the Bolsheviks had to fight against the weight of tradition, social and religious, as well as the stifling influence of the Mullahs, which was on the side of the Feudalists and Nationalists. The British Consul-General continued his anti-Soviet activities (even after the " White " forces in the winter of 1919–20 had been crushed) so assiduously that apparently he did not follow attentively the Anglo-Soviet trade negotiations in London. He relates:

> " Unfortunately I was not made aware that the Trade Agreement was pending, and therefore had no opportunity of preparing the way for a cessation of the counter-propaganda work I had been directed to carry out, and which, in accordance with the terms of the agreement, would be discontinued on the latter becoming operative. I was consequently placed in an invidious position, for on the agreement being ratified, the Bolsheviks broadcasted a statement that they had concluded a treaty with the leader of the Allies, in addition to seven other Governments—whose names were not, however, vouchsafed—adding that the conclusion of a treaty with the foremost European Power must show that my news bulletins and counter-propaganda were devoid of foundation in fact." [1]

After the internment of one Khan and the flight of the other, their adherents, although leaderless for the time being, did not give up the struggle. As so often happened on similar occasions, a clever, energetic and ambitious adventurer saw his opportunity, offered his services as a saviour and for a time met with some, even striking, success. The " White Hope " was an ex-Turkish officer, Enver Pasha.

Enver had had a distinguished career in the Turkish army in the early days of the first World War, but towards the close fell into dis-

[1] *Op. cit.*

grace, because the forces which he led had been crushingly defeated in the Caucasus. He narrowly escaped with his life, and later succeeded in reaching the R.S.F.S.R. He was a bitter rival of Kemal Pasha, and hoped to win Soviet support against the latter. In addition, he had dreams of organising a great Moslem State, or Federation, from the existing Moslem States of Central Asia.

After the conclusion of the Soviet–Turkish Treaty of Friendship (March 1921) he realised that he could not get Soviet help against Kemal, and apparently decided to attempt the realisation of his ambitions, using the "Basmachi"—the adherents of the ex-Emir of Bukhara—as the first tool to his hand.

Despite the fact that the Soviet leaders had their suspicions of Enver, they allowed him considerable freedom of movement. He continued to express friendship towards the Soviets, but in the summer of 1921 he went to Bukhara and secretly established connection with the adherents of the ex-Khan. Becoming head of these Basmachi, Enver started open warfare against the Bolsheviks. He did his best to persuade the Basmachi to adopt his own Pan-Turanian [1] ideology, but was not very successful in this respect.

He sent emissaries to Kabul, where he found a ready response among Court circles whose ambitions turned to the annexation of Bukhara to Afghanistan.

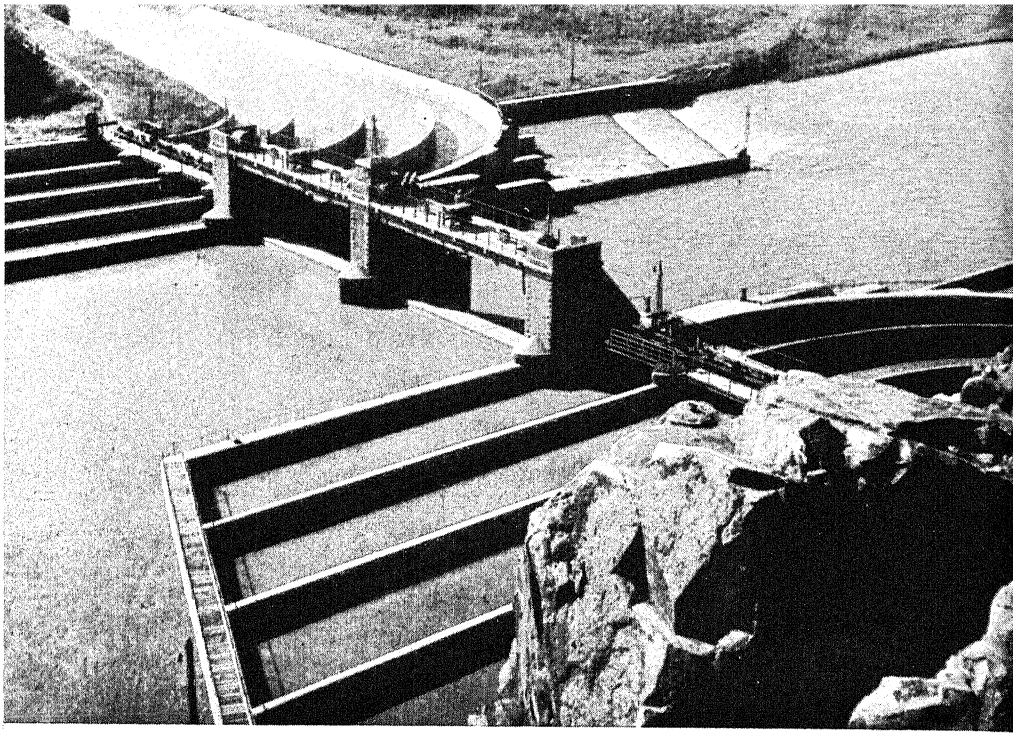
With the assistance of the Afghan Minister in Bukhara and 1,000 Afghan troops, Enver mobilised an army, but although he spent a year in Bukhara, his movement never reached large-scale proportions, and after some time the Basmachi movement itself fizzled out.

Some said—with what truth we do not know—that Enver received funds and arms from Britain; the only thing certain is that the Basmachi had English rifles and ammunition, possibly obtained earlier from British agents in Turkestan.

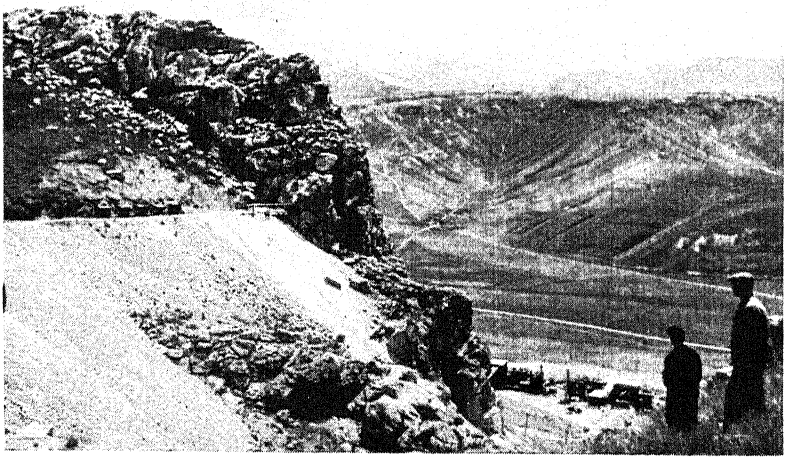
Enver's main forces were heavily defeated by the Red Army in June 1922 and put to flight. The Red Army followed up the shattered band, and practically annihilated the remnants on August 4, 1922. Enver himself was found among the killed. Deprived of their capable leader, the Basmachi took to brigandage, and were not finally exterminated till some years later.

[1] A movement dating back some 3,000 years as an aspiration for the union of all peoples of Turkic stock. Received some prominence from time to time in recent history, and this tradition was adopted and exploited by Enver for his own aims.

The old crafts are kept alive in the co-operatives. Rakhmat Mirzayev, who has had fifty years' experience of gold embroidery, with a pupil.



Great irrigation projects are transforming the plains. This dam is on the Chu River; note the two irrigation canals branching off.



Valuable mineral deposits are worked in the mountains.

In Turkestan, as might be expected, the progress towards Sovietisation moved less rapidly than in other parts of the R.S.F.S.R.

Around Tashkent and other cities where there were Russians in some numbers, and where capitalism in cotton-growing had developed, Soviets were established, and functioned well. The Russians did not try to force their opinions—that would have been fatal—but they tried to win local people to their point of view, training them for work among their compatriots.

The Feudalists, Nationalists and Mullahs continued to exploit the native suspicions and hatred resulting from the old Russian domination, but the Bolsheviks had, among others, one exceptionally effective reply—i.e. the Soviet decrees on the right to secede if the native peoples so desired. National feeling, as elsewhere, was strong, and many of the peasantry had a feeling of kinship with the beys of their own nationality, old customs and ideas had a tenacious hold on them, and they were not easily won round to the idea of confiscating the land and water-rights of the beys, and much less so to the idea of confiscating the land and water-rights of the Mullahs.

However, what had been achieved in these matters in other parts of the R.S.F.S.R. gradually produced a profound effect on the peasantry. William Mandel related that in 1921 " the Soviet Government felt that it had won sufficient support among the native population in parts of Kazakhstan and Kirghizia, the places where Soviet rule was longest established, to undertake a land reform which meant, in essence, the overthrow of feudalism. The lands of the beys and the mosques were divided among the poorest peasantry, and in those areas where the Tsarist policy of colonisation had been pursued, particular care was taken to guarantee that the lands of the wealthier Russian peasants, the kulaks, were restored to their original owners." [1]

The author pointed out that neither Bukhara, Khorezm nor the Turkoman territory near the Caspian Sea " were as yet ready for this step ", which drew " a sharp line between the vast mass of the population of those territories where the reform was carried through and the handful of beys and Mullahs ".[2]

Meanwhile the Government of the R.S.F.S.R. had concluded Treaties of Mutual Defence and Trade with the Republics of Bukhara and Khorezm. These agreements hastened developments within the Republics, because they reduced the possibilities of the Basmachi

[1] *The Soviet Far East and Central Asia.*
[2] *Op. cit.*

receiving aid from outside; they helped in the economic restoration of the areas, and they strengthened the elements pressing for drastic land reform, which first expressed itself in the confiscation of the land of the deposed Emirs. That process, once started, could not be stayed, but the influence of the Mullahs and beys still acted as a brake, albeit a less powerful one. The Russians also helped the workers and peasants of both States in the development of trade unions and peasant unions.

In all this work the master hand of Stalin was revealed, as many articles and reports in the Soviet Press bear witness. He dealt at length with the subject in a Report to the 10th Congress of the Communist Party on March 10, 1921. Getting at once to the heart of the question, Stalin stated:

> "Although under the Soviet regime in Russia and in the republics associated with Russia we no longer have ruling nationalities or subject nationalities, mother country or colonies, exploited or exploiters, nevertheless the national problem still exists in Russia. The crux of the national problem in the R.S.F.S.R. lies in the obligation to put an end to that backwardness (economic, political and cultural) of the nationalities which we have inherited from the past and to afford the backward peoples the opportunity of catching up with Central Russia politically, culturally and economically." [1]

Glancing back to the colonial policy of the Tsarist regime, he declared:

> "Under the old regime, the Tsarist Government did not strive, and could not strive, to develop the political life of the Ukraine, Azerbaidjan, Turkestan, and the other border regions; it resisted the development of political life in the border regions, just as it resisted their cultural development, and endeavoured to assimilate the native populations forcibly. Furthermore, the old government, the landlords and the capitalists, have left us as a heritage such browbeaten peoples as the Kirghiz, the Chechens and the Ossets, whose lands served as an object of colonisation by the Cossacks and Kulak elements of Russia. These peoples were doomed to incredible suffering and to extinction." [2]

[1] *Marxism and the National and Colonial Question.*
[2] Ibid.

Even some Communists, both Russian and non-Russian, had not then quite freed themselves from the old ways of thinking:

> "Moreover, the position of the Great-Russian nation, which was the dominant nation, has left its traces even on the Russian Communists, who are unable, or unwilling, to establish closer contact with the toiling native masses, to comprehend their needs and to help them emerge from their backward and uncivilised state. I am referring to those not very numerous groups of Russian Communists, who, ignoring in their work the peculiarities of social life and culture in the border regions, at times tend towards Russian Great-Power chauvinism. Nor has the position of the non-Russian nationalities, which have suffered national oppression, failed to leave its traces on the native Communists, who are at times unable to distinguish the class interests of the toiling masses of their people from the so-called 'national' interests. I am referring to the deviation towards local native nationalism which is at times to be observed in the ranks of the native Communists and which in the East expresses itself in Pan-Islamism and Pan-Turkism." [1]

So much for the problem which was easy to state, but hard to solve. Stalin continued:

> "Having described the immediate tasks of the Party, I should like to pass to the general task, of adapting our Communist policy in the border regions to those specific conditions of economic life which are to be found chiefly in the East.
>
> "The fact of the matter is that a number of peoples, mainly Turkic peoples—about thirty million in all—have not passed, have not had time to pass, through the period of industrial capitalism, and consequently have no industrial proletariat, or practically no industrial proletariat, and as a result will have to pass from primitive forms of economy to the stage of Soviet economy without passing through the stage of industrial capitalism. In order to effect this difficult but by no means impossible operation, we must take into account all the peculiarities of economic life and even the history, social life and culture of these peoples. To transplant to the territories of these peoples the measures which were effective and important here, in the centre

[1] *Marxism and the National and Colonial Question.*

of Russia, would be absurd and dangerous. It is clear that, when putting the economic policy of the R.S.F.S.R. into practice, we must unfailingly take into account all the peculiarities of economic life, class structure and historical past which mark the border regions." [1]

The Bolsheviks stood for equality between the nationalities which made up the former Tsarist Empire, but they knew how deceptive that fine word could be. Stalin, after restating the thesis quoted above, continued:

> " But from this it follows that we cannot content ourselves with 'national equality' and that 'national equality' must be extended by means of measures for securing the real equality of nationalities, and that we must proceed to work out and put into effect practical measures in relation to:
>
> 1. The study of the economic conditions, social life and culture of the backward nations and peoples;
> 2. The development of their culture;
> 3. Their political education;
> 4. Their gradual and painless incorporation into the higher forms of economic life; and
> 5. The organisation of economic co-operation between the toilers of the backward and the advanced nationalities.
>
> Such are the five principal factors which distinguish the new formulation of the national question as given by the Communists." [2]

As we shall see later, this was a long process, and Stalin always emphasised that fact, but was confident of final success.

Within Bukhara developments moved more rapidly in the year 1922. Mandel relates:

> " Meanwhile, steps for the economic rehabilitation and cultural progress of Bukhara were being pushed energetically. After a party purge in 1922 which cleaned out the beys and many of their agents, trade improved, the area under crop, which had fallen throughout Central Asia by two-thirds during the Civil

[1] *Marxism and the National and Colonial Question.*
[2] Ibid.

War, increased, an apparatus of administration was organised, and irrigation canals, ways of communication and transport were rebuilt." [1]

That year, 1922, was historic in the evolution of Soviet Russia; it witnessed the preparations for the transformation of the Allied Republics of the R.S.F.S.R. and the Socialist Soviet Republics of Transcaucasia, Byelorussia and the Ukraine into the Union of Soviet Socialist Republics.

What would be the attitude of the Union to Bukhara and Khorezm? Speaking at the tenth All-Russian Congress of Soviets, December 26, 1922, Stalin said:

> " The union will be made up of four republics; the R.S.F.S.R. as an integral federal unit, the Transcaucasian Republic, also as an integral federal unit, the Ukraine and White Russia. Two independent Soviet republics, Khorezm and Bukhara, which are not socialist republics, but people's Soviet republics, for the time being remain outside the union for the sole and exclusive reason that these republics are not socialist. I do not doubt, comrades, and I hope that you also do not doubt, that these republics, as they internally develop towards socialism will also come to form part of the confederate state which is now being constituted." [2]

Stalin, ever watchful of the need to speed up developments in the former Tsarist colonies, realised that schools alone, as some comrades apparently thought, would not solve the problem. At the twelfth Congress of the Russian Communist Party, April 23, 1923, he said:

> " The trouble is that some nationalities have no proletarians of their own, have never passed through the stage of industrial development, or even entered that stage, are frightfully backward culturally, and are entirely unable to take advantage of the rights granted them by the revolution. This, comrades, is a question of greater importance than the question of schools. Some of our comrades here think that the knot can be unravelled by stressing the question of schools and language. That is not so, comrades. Schools will not get you very far. The schools are developing, so are the languages; but actual inequality is the basis of all discord and friction. Talk of schools and language is not enough.

[1] *The Soviet Far East.*
[2] *Marxism and the National and Colonial Question.*

"What is wanted is real, systematic, sincere and genuine proletarian assistance to the toiling masses of the culturally and economically backward nationalities. Apart from schools and language, the Russian proletariat must take every measure to establish centres of industry in the border regions in the republics which are culturally backward—backward not through any fault of their own, but because they were formerly looked upon as sources of raw materials. Certain attempts have already been made in this direction. One factory from Moscow has already been transferred to Georgia and will probably soon start operation. Bukhara has taken one factory, and might have taken four. Turkestan is taking one large factory.

"Thus the conditions now exist enabling these republics, which are backward economically and possess no proletariat, to establish with the aid of the Russian proletariat their own centres of industry, small though they may be, in order to create in these centres groups of local proletarians who will serve as a bridge between the Russian proletarians and peasants and the toilers of these republics. In this sphere serious work is required; and here talk of schools and language alone is not enough," [1]

Russian fraternal help bore good fruit, and in 1923 Bukhara passed several milestones on the road to socialism.

"In 1923, a fourth of the state revenue in Bukhara was devoted to education, and the first real dent was made in illiteracy. Twenty-four medical specialists, 136 general practitioners and 154 nurses were assigned to Bukhara by the R.S.F.S.R. during the same year, under the agreement on assistance concluded in 1921. By 1923, labour unions, previously unknown, had reached a membership of 12,000, and their members helped the newly-organised Peasants' Union to convince the peasantry that their interests differed basically from the beys.

"As a result, the Basmachi, who previously could count on the neutrality, if not the actual support, of the peasantry, now found 'their own' dekhkans hunting them out of the hills. By 1924, the acreage sown to cotton had doubled again by comparison with 1923 (during the Civil War the cotton lands were sown to grain, due to the disruption of communications with Russia)." [2]

[1] *Op. cit.*
[2] *The Soviet Far East.*

It is necessary to explain here the national make-up of Bukhara and Khorezm. In Bukhara the Uzbeks were the largest nationality, the Turkomans the second, and the Kirghiz the third. In Khorezm the largest nationality was Uzbek and the second Turkoman. The Uzbeks were thus the largest nationality in both Republics.

The organisation of separate States in other parts of the U.S.S.R. quickened the national consciousness of the different nationalities within Bukhara and Khorezm, and already in 1923 congresses of the different nationalities were held at which insistent demands for the establishment of their own States were made. The Soviet Power encouraged this healthy development.

Despite all this progress in Turkestan generally, the Soviet Government was not satisfied. It never is. Responsible workers were, and are always, being urged to greater and still greater efforts.

Stalin, at a conference of responsible workers of the national republics and regions, June 10, 1923, stated:

> " I take upon myself certain of the charges brought by Comrade Ikramov against the work of the Central Committee to the effect that we were not always attentive and did not always succeed in raising in time the practical questions dictated by the situation in the Eastern republics and regions. Of course, the Central Committee is overburdened with work and is not in a position to attend to everything. It would be ridiculous to think that the Central Committee can do everything in time.
>
> " Of course, there are not enough schools in Turkestan. The use of the local languages has not yet become the practice in the state institutions, the institutions have not been naturalised. Culture in general is at a low level. All this is true. But can it seriously be hoped that the Central Committee or the Party as a whole can raise the cultural level of Turkestan in two or three years?
>
> " We are all shouting and complaining that Russian culture, the culture of the Russian people, which is more cultured than the other peoples of the Union of Republics, is at a low level. Ilyich is always crying that we have no culture yet, that there is no possibility of raising Russian culture appreciably in two or three, or even ten years. And if it is impossible to raise Russian culture in two or three, or even ten years, how can we demand a rapid rise in culture in the non-Russian, backward, semi-literate

> regions? Is it not clear that nine-tenths of the 'fault' lies with the circumstances of the situation, the backwardness, and, as the phrase is, nothing can be done about it?" [1]

By 1924 the foundations had been laid for another great advance. In September of that year the Soviet Congress of Bukhara and Khorezm declared both republics "Socialist Soviet Republics". Also the Congress of the Soviets of Turkestan, Bukhara and Khorezm decided to re-distribute the territories of these Republics on the basis of nationalities. As a result, the Soviet Socialist Republics of Uzbekistan (with Tadzhikistan Soviet Socialist Autonomous Republic) and Turkmenistan were established.

Uzbekistan included all the areas of the two former Republics which were predominantly Uzbek, to which were added the other areas of Turkestan which were also predominantly Uzbek. Turkmenistan included the areas of the two former Republics which were predominantly Turkoman, to which were added the large Turkoman areas bordering on the Caspian, as well as all districts of Turkestan which were predominantly Turkoman. The two new Soviet Socialist Republics took in considerable areas which had formed part of the autonomous Republic of Turkestan.

Frontier changes throughout history and in all parts of the globe have been settled almost invariably by war. Here they were settled by socialist consciousness, goodwill and economic considerations, in which common sense played a big role.

M. Mikhailov, in his *Soviet Geography*, states:

> "Care was taken in laying down the frontiers in accordance with the national principle not to clash in any way with the economic divisions. Regions that were economic units were not broken up. Each irrigation system, for instance, was included as a rule in one State. The national principle was completed and corrected by the economic principle."

Immediately afterwards the two new Republics applied to enter the U.S.S.R. as Union Republics, and the second Session of the Central Executive Committee of the U.S.S.R. announced on October 7, 1924, its readiness to admit them into the Union. This decision was ratified in due course by both sides, and the two Republics were admitted into the Union in May 1925.

[1] *Marxism and the National and Colonial Question.*

The Union Government was immensely proud of this development, as it had a full right to be. Stalin, speaking at a students' meeting of the University of the Peoples of the East, May 18, 1925, stated:

"I have spoken of bringing the Soviets into closer touch with the toiling masses of nationalities, of naturalising the Soviets. But what does this mean, and how does it manifest itself in practice? I think that the recent delimitation of national frontiers in Turkestan may be regarded as an excellent example of how the Soviets can be brought into closer touch with the masses. The bourgeois press regards this delimitation of frontiers as 'Bolshevik trickery'. Yet it is clear that this is a manifestation not of 'trickery', but of the profound aspiration of the masses of the people of Turkmenistan and Uzbekistan for their own organs of government, which shall be close and comprehensible to them.

"In the pre-revolutionary era, both these countries were torn into fragments, into various khanates and states, and were a convenient field for the exploitatory machinations of the 'powers that be'. The time has now come when these scattered fragments can be *reunited* into independent States, so that the toiling masses of Uzbekistan and Turkmenistan can be united and welded with the organs of government. The delimitation of frontiers in Turkestan is primarily the *reunion* of the scattered parts of these countries into independent states.

"The fact that these states then desired to join the Soviet Union as equal members thereof merely signifies that the Bolsheviks have found the key to the profound aspirations of the masses of the East, and that the Soviet Union is the only voluntary union of the toiling masses of various nationalities in the world. In order to reunite Poland, the bourgeoisie required a series of wars. But in order to reunite Turkmenistan and Uzbekistan, the Communists required only a few months of explanatory propaganda.

"That is the way to bring the organs of administration, in this case the Soviets, into close touch with the broad masses of the toilers of the various nationalities.

"That is the proof that the Bolshevik national policy is the only right policy." [1]

This was probably the first time in recorded history that such important frontier changes were made without at least the rattling of

[1] *Marxism and the National and Colonial Question.*

a sabre. Even the great " undefended frontier ", the American-Canadian frontier, was not settled without threats of possible hostilities.

In the same speech Stalin, in his clear and forcible style, outlining " the immediate tasks which confront active workers in the Soviet East ", said:

" 1. To create industrial centres in the Soviet Republics of the East as bases on which the peasants can be rallied around the working class. You know that this work has already been begun and that it will progress with the economic growth of the Soviet Union. The fact that these countries possess all kinds of raw materials is a guarantee that in time this work will be completed.

" 2. To advance agriculture and above all irrigation. As you know, this work, too, is progressing, at least in Transcaucasia and in Turkestan.

" 3. To improve and advance co-operative organisation among the broad masses of the peasants and handicraftsmen as the most reliable way of bringing the Soviet republics of the East into the general system of Soviet economic development.

" 4. To bring the Soviets into closer touch with the masses; to make them national in composition, and in this way to implant a national Soviet state organisation that will be close and comprehensible to the toiling masses.

" 5. To develop national culture; to build up a wide system of courses and schools for both general education and vocational and technical training, teaching in the native languages, with the purpose of training Soviet Party, trade union and economic cadres from among the native people.

" It is the accomplishment of these tasks that will facilitate the work of socialist construction in the Soviet republics of the East." [1]

Here was a programme which could fire the imagination, arouse the enthusiasm, and yet at the same time develop the practical abilities of the people concerned. It did all these, and eventually the programme was realised.

In the following year what was left of " Turkestan " as such ceased to exist, and the two new autonomous Republics, Kazakhstan and Kirghizia, within the R.S.F.S.R. came into existence.

To sum up the position in 1926, Turkestan and the semi-independent

[1] *Op. cit.*

Khanates of Bukhara and Khiva had ceased to exist, and the Union Republics of Turkmenia and Uzbekistan, the autonomous Republic of Tadzhikistan (within Uzbekistan), and the autonomous Republics of Kazakhstan and Kirghizia (within the R.S.F.S.R.) had taken their place.

The Central Asian districts had lagged behind Western Russia in nationalising the land, but from 1924 to 1925 rapid steps were made in this direction. Many of the Feudalists, Nationalists, and even the Mullahs realised that the old relations were gone for ever, and they decided to work, at any rate for the time being, in the new institutions which had been set up, but many, as in other parts of the Soviet Union, were far from loyal workers, and they often resorted to sabotage. Many of the local intellectuals who joined the Soviets, and even the Communist Party, did so determined to check developments in so far as it lay in their power.

By 1930–31 the Republics of Central Asia were ready and able to march abreast with the rest of the U.S.S.R. in establishing collective farms, but here, as elsewhere, the Kulaks both destroyed their cattle and sabotaged the working of the Kolkhozy. Some of the Mullahs supported collectivisation, and even quoted the Koran in support. The Basmachi, who had been steadily losing ground as the Republics developed and became more prosperous, were completely liquidated by 1931. Had it not been for help received from across the Afghanistan frontier, the end would have come earlier.

As mentioned above, Tadzhikistan had been organised as an Autonomous Republic within Uzbekistan in 1924. In 1929 it was raised to the status of a Union Republic, and on December 5 of that year was admitted as a Constituent Republic of the U.S.S.R.

Many factors played their part in the development of the Soviet Power in Central Asia, and one of these vital factors was " friendship between the Peoples ". No man understood the importance of this essential factor better than Stalin. He was present at a conference of the leading collective farmers of the Tadzhik and Turkmenian Republics on December 4, 1935. All present were very pleased at the successes of cotton-growing which had been attained. First Stalin announced some collective and individual awards. He said:

" Comrades, the presidium of this conference has instructed me to make two announcements.

" Firstly, that the presidium intends to recommend for highest

award, for an order of distinction, all those present at this conference, men and women, for their excellent work.

"Secondly, that the government has decided to make a gift of an automobile truck to every collective farm represented here and to present every participant at this conference with a gramophone and records and watches—pocket-watches for the men and wrist-watches for the women.

"I am being told on all hands that I must say something——"

Voices: "Quite right."

"What is there to say? Everything has been said." [1]

Nevertheless, although Stalin was never a man to waste words, he did say a little more, and, as always, he said much in a small compass. He continued:

"Evidently, you are going to make a success of cotton. That is apparent from everything that is going on here. Your collective farms are growing, you have the desire to work, we shall give you machines as well as fertilisers and every kind of assistance you may possibly need—Comrade Molotov, the Chairman of the Council of People's Commissars, has already told you that—will be given. Consequently, you will make a success of cotton, and a prosperous life is opening up.

"But, comrades, there is one thing more precious than cotton—it is the friendship between the peoples of our country. The present conference, your speeches, your actions, go to show that the friendship between the peoples of our great country is growing stronger. That is a very important and noteworthy fact, comrades. In the old days, when the Tsar, the capitalists, and the landlords were in power in our country, it was the policy of the government to make one people—the Russian people—the dominant people, and all the other peoples subjugated and oppressed peoples. That was a bestial, a wolfish policy.

"In October 1917, when the great proletarian revolution began in our country, when we overthrew the Tsar, the landlords and capitalists, the great Lenin, our teacher, our father and tutor, said that henceforth there must be neither dominated nor subjugated peoples, that the peoples must be equal and free. In this way he buried the old Tsarist, bourgeois policy and proclaimed a new policy, a Bolshevik policy—a policy of friendship, a policy of brotherhood between the peoples of our country.

[1] W. Mandel, *The Soviet Far East and Central Asia.*

" Since then eighteen years have elapsed. And now we already see the beneficial results of this policy. The present conference is a vivid proof of the fact that the former mistrust between the peoples of the USSR has long ago been laid to rest, that mistrust has been replaced by complete and mutual trust, that the friendship between the peoples of the USSR is growing and gaining in strength. That, comrades, is the most precious thing that the Bolshevik national policy has given us.

" And friendship among the peoples of the USSR is a great and important achievement. For as long as this friendship exists, the peoples of our country will be free and invincible. Nothing can daunt us, neither enemies at home nor enemies abroad, as long as this friendship lives and flourishes. You have no doubt of that, comrades." [1]

We would underline the last paragraph. These were not empty words. They were fully justified at the time, and have proved their vitality in a second world war.

One of the most difficult problems with which the Soviet Power had to contend in Central Asia were the nomads, particularly in Kazakhstan and Kirghizia. They did not take easily to a settled life. However, by a combination of education and practical example, they were eventually convinced of the great advantages of a settled mode of life. This enabled the Soviet Power to make another big political advance in these areas.

In December 1936 the autonomous Republics of Kirghizia and Kazakhstan were raised to the level of Union Republics and admitted as Constituent Republics of the U.S.S.R. The backward Government-General of Turkestan and the Government-General of the Steppe provinces, as well as the semi-independent medieval Khanates of Bukhara and Khiva of Tsarist times, had ceased to exist as such, and on their territories the five smiling and prosperous Soviet Socialist Republics of Central Asia had been erected.

[1] W. Mandel, *The Soviet Far East and Central Asia.*

PART II

THE SOVIET CENTRAL ASIAN REPUBLICS TODAY

CHAPTER VI

CENTRAL ASIA UNDER THE SOVIETS

In previous chapters we have dealt with the history and formation of the five Central Asian Republics, as well as their general economic and cultural conditions prior to the Soviet Revolution. But what are they like now? Before we answer this question by describing something of what we saw and learnt in a recent visit to these Republics, it will be as well first of all to say a few words regarding the characteristics, features and development of Soviet Central Asia as a whole.

Central Asia, although largely desert, was always considered a live-stock-breeding and agricultural country, albeit entirely primitive. Many of its inhabitants were nomads who wandered through the sandy deserts and along the mountain valleys in constant search for fresh grass. In the comparatively rare oases others sowed cotton, tilling the soil with wooden ploughs. The great feature of Central Asia was its vast sandy deserts.

> "A seventh part of the U.S.S.R.—the plains of Central Asia, the south of the Left Volga Region, and of Kazakhstan—is bounded by a belt indicating 200 millimetres of atmospheric precipitation a year. Within this vast area the figures of the atmospheric precipitation fall to nearly zero. There is no rain in summer. This is the desert zone whose area is more than twice that of the whole cultivated area of the U.S.S.R.
>
> "The few and scanty rivers do not flow into the ocean, but peter out at the bottom of a gigantic flat basin. The swift waters disregard the parched and hot soil, giving it no moisture, and, falling into the closed basins of the Caspian, the Aral, and the Balkhash, they evaporate under the pitiless sun.
>
> "Desert lands cover 50 per cent of the territory of Uzbekistan and Kazakhstan, 85 per cent of Turkmenia." [1]

At first glance these figures look terrifying and tend to produce a feeling of hopelessness. This frame of mind is heightened when the following explanatory statistics are added. The sand desert of the

[1] Mikhailov, *Soviet Geography*, p. 125.

Kara-Kum (Black Sands) in Turkmenia covers an area of 35 million hectares, and the adjoining desert of Kzyl-Kum (Red Sands) in Uzbekistan covers an area of 20 million hectares. Together they form the largest desert area in the world.

An immense dead world as lifeless as the moon? No, not by any means. The desert, strange though it may sound, is potentially very fertile.

It will not be out of place here to cite what that far-seeing planner, the late President Roosevelt, stated on this very subject to his son Elliott during an interlude at the Casablanca Conference (January 1943). Elliott Roosevelt relates:

> " Over coffee he got back on the theme of the development of colonial areas, increasingly one of his favourite topics. For a man who had never been in Africa before, he had picked up an amazing amount of information, geographical, geological, agricultural.
>
> " We discussed the great salt flats in southern Tunisia, which must have at one time been a vast inland sea. He reminded us of the rivers that spring up in the Atlas Mountains, to the south, and disappear under the Sahara, to become subterranean rivers.
>
> " Divert this water flow for irrigation purposes. It'd make the Imperial Valley in California look like a cabbage patch!
>
> " And the salt flats: they were below the level of the Mediterranean; you could dig a canal straight back to re-create that lake—150 miles long, 60 miles wide. ' The Sahara would bloom for hundreds of miles! '
>
> " It is true. The Sahara is not just sand, it has an amazingly rich potential. Every time there is a rain, there is a consequent riot of flowers for a few days, before the dryness and the sun kill them off. Father was having the time of his life, his active mind and quick imagination working overtime as we all speculated on what intelligent planning could do for this land.
>
> " ' Wealth,' he cried. ' Imperialists don't realise what they can do, what they can create! They've robbed this continent of billions, and all because they were too short-sighted to understand that their billions were pennies compared to the possibilities that *must* include a better life for the people who inhabit this land." [1]

Roosevelt knew what he was talking about not only as regards the desert but also including the blindness of the imperialist.

[1] *Reynolds News*, 17.11.1946.

However, the eyes of the Soviet Power are not imperialist, they are strong, penetrating and far-seeing. We repeat, the desert is not dead; it contains immense potential riches. The well-known Soviet authority, Mikhailov, referring to the deserts of Soviet Central Asia, also points out:

> " Amidst the sand wastes and great saline tracts there are many places with very fertile loess soil. There is a cloudless sky here and an abundance of solar energy. On loess soil the poplar becomes an adult tree in three or four years. The cotton crop is capable of the highest yield per acre. There may be as many as seven harvests of lucerne in one year. Fruit grown in these regions has a very high sugar content. Here can be grown hibuscus cannabinus, kendyr, ramie, abutilon aricennac, southern hemp, the castor-oil plant, sesame, eucalyptus, rubber-bearing plants, grapes, apples, pears, peaches, apricots, melons, walnuts, figs and so on.
>
> " This region possesses incredible potential fertility, which can be fully revealed only in conditions of artificial irrigation. The region needs new rivers." [1]

He further states:

> " The sand deserts seem to be the apotheosis of sterility. And indeed it could not be otherwise. Life in vegetable tissue is extinguished at 54° C., while the sand is heated to a temperature of 70°. Yet it is easier to cultivate these sandy deserts than any other.
>
> " The sand greedily absorbs and filters winter and spring water, but because it is possessed of a weak power of capillarity it does not evaporate the water. There is always a stratum of water under the sand for a plant with a sufficiently long root." [2]

And such plants are now available in great variety. The sandy desert was man-made. The author continues:

> " The sandy desert, covered by crumbling sandhills and not by vegetation, is a product, not of nature, but of man. The savage cut down the saksaul, tended his cattle irrationally and wastefully, and the hooves of the nomad herds broke up the sand.

[1] *Soviet Geography.*
[2] Ibid.

"If man loosened the sands he is capable of putting them together again.

"Sand deserts are easier to cultivate than any other, and it is just this type of desert that prevails in the U.S.S.R. . . .

"Where the sand is not broken up it is covered by a peculiar kind of dry vegetation, on which camels and sheep feed. Some of the desert plants are highly nutritious."

Cattle-breeding can and is being carried on in the desert:

"Cattle-breeding is the chief method by which those deserts, which are not yet transformed into agricultural regions by means of irrigation, will yield a return. The poorest pasture-lands in the country will be giving (and yield already) the most valuable products. Sand deserts are most suitable for the breeding of Astrakhan sheep, a very profitable occupation. The desert pastures are capable of feeding as many as 70 million head of cattle."

The flora of the desert can be changed and made more profitable for the use of man. Mikhailov relates:

"The flora of the desert will be changed. The problem is to replace under-productive or inedible plants by edible ones. Such plants have been found and tested: the yerek, a perennial cereal which in nutritiousness resembles bran, and is extremely hardy, and drought-enduring; sand barley, which possesses in high degree the power of strengthening the sands; sand oats, which are less nourishing, but are able to endure drought and heat; melilot, yellow lucerne and others. It is easy to sow the seeds of these plants from aeroplanes. Selection makes it possible to deal even with clayey and saline soils.

"The productivity of artificial grasses is many times higher than that of wild vegetation, to say nothing of the difference in the quality of the hay." [1]

Forestry has an important role to play in the reclamation of the desert. He continues:

"The 'tree of the desert', the saksaul, provides good fuel, strengthens the sands, and can serve as a decorative plant. The reserves of fuel in the black saksaul groves yield as much as 40

[1] *Soviet Geography.*

tons a hectare. This is a large figure for deserts. Artificial sowing of saksaul seeds from aeroplanes will renew the greatly thinned forests of the deserts. Drought-enduring trees will penetrate into the desert—the pistachio tree, the fig tree and the almond tree.

" The desert plants are revealing unexpected value. Some of them are capable of producing potash, alkaloids, gum, magenta, dyes, starch and sugar. They are already being utilised." [1]

In brief, tropical plants, industrial plants, grains and vegetables of all kinds can be profitably grown in the desert when the work is carried out in accordance with the latest scientific knowledge. As to subsoil water, the author states:

" The desert can be made to bloom: water is the main question. But desert plants do not use more than 50 per cent of the moisture—the rest is lost. Wells have to be dug to reach the subsoil water, which should then be raised to the surface by means of the energy of the wind and sun."

Respecting surface-water, we deal in this and later chapters with the immense irrigation schemes which have been and are being carried out in Central Asian Republics. Here we would only add that there are sufficient underground and surface rivers, springs and subsoil water in these Republics, coupled with the many other and varied measures, for fighting the desert menace—some of which we outline—to transform the " dead " sand deserts into rich arable land and smiling meadows.

The sand deserts are immensely rich in mineral wealth, and this is now being exploited.

" Large industrial enterprises are springing up in the desert. Chemical combines in Aktiubinsk and Kara-Bougaz, coal-mines in Karaganda, a vast copper-foundry works on the banks of the Balkhash, and a sulphur works in Kara-Kum." [2]

The still untapped mineral resources can be profitably utilised as the means of communication are developed.

M. Mikhailov sums up this part of his subject thus:

" Clearly the struggle with the desert is not an easy one. It is not surprising that natural selection was impotent in the face of the

[1] *Soviet Geography.*
[2] Ibid.

> desert. And yet the driest and hottest part of the desert gave man bread, barley bread though it was. Does this not speak of the approaching end of the desert? "

All the scientists and Ministers whom we interviewed in the Central Asian Republics answered with an emphatic " yes ", the desert as such is doomed.

The U.S.S.R. is a country of planned socialist economy, and as an illustration of the effect of such an economy in Central Asia may be cited the planned distribution of the water supplies of the Central Asian Soviet Socialist Republics.

In the East water is often described as the elixir of life. It is a subject for oriental poetry, and as an ancient Eastern proverb says, " Where there is water there are gardens, where there is no water there is a graveyard." Before the establishment of the Soviets, water was a prime cause of anxiety, and even of bloodshed, among the peoples of these areas. Everyone tried to get as much as possible for himself, and those in a position to do so would dam the streams and rivers flowing through their territory, thus cutting off the peoples inhabiting the lower reaches of the rivers from water and depriving them of their means of subsistence. The struggle for water was a constant source of friction between the peoples—a friction which, as we have already seen, the Tsarist officials often did their best to instigate and foster as a means of securing their own supremacy on the principle of " divide and conquer ".

In addition, what irrigation canals there were belonged to the landlords, who charged the peasantry exorbitant prices for this water. The peasants dug primitive ditches on their land, but this did little to alleviate the thirst of the land for water. The primitive irrigation systems built 100 and 500 years ago were still in use early in the 20th century. The Tsarist Government started small irrigation improvements, investing for this purpose a total of some 35 million roubles, but this benefited mainly the landowners who were in possession of the sources of origin.

All this was changed with the establishment of the Soviets. Water, like the land, became the property of the nation, the old irrigation system was completely reconstructed and major irrigation systems were constructed by the joint efforts of the peoples of the Central Asian Republics. Thus the great Ferghana Canal, the first large canal on the Syr-Darya, was built jointly by the peasants of Tadzhiki-

stan and Uzbekistan. The war unfortunately put a stop to or slowed down irrigation projects, but after the conclusion of the war work was resumed with redoubled energy.

For instance, the Great Chu Canal, under construction in 1947, will irrigate some 70,000 hectares in Kirghizia and 10,000 hectares in Kazakhstan, and is being built jointly by the peoples of these two Republics. The Kairak-Kum reservoir of the Syr-Darya is also being built jointly by the Central Asian Republics. This artificial lake will have a volume of 14,000 million cubic metres for use in the low-water seasons of the river, and when completed will keep the level of the Syr-Darya sufficiently high at all seasons of the year.

In the spring of 1941 the construction of the Orto-Tokai water reservoir was started, but was interrupted as a result of the war. After the conclusion of the latter, work was restarted, and by June 1948 the first section of this reservoir was completed, and the water contained in it makes possible the irrigation of 30,000 acres of new land, as well as to improve the water supply for 60,000 acres of existing cotton plantations. The second section of the Orto-Tokai reservoir has since been completed.

All the water resources of the Central Asian Republics are now used for the common good of all the Republics. Thus the Syr-Darya river, the longest in Central Asia, flows through the territory of four Republics—i.e. Kirghizia, Uzbekistan, Tadzhikistan and Kazakhstan. In its valley the most valuable cultivated crop is cotton, and the water of the river is allocated between the Republics by a joint meeting of their representatives strictly in accordance with the needs of each, regardless of which Republic is most favourably situated to get most water. Conferences of the Ministers for Water Resources of the Central Asian Republics are held regularly every spring, and invariably a friendly agreement on the subject is reached. These conferences also discuss and adjudicate on the distribution of the water of the Amu-Darya, the second largest river in Central Asia, and of other rivers which flow through more than one of the Republics.

The Republics also, of course, operate their irrigation canals jointly. Information regarding sowing plans is exchanged, and on this basis the quantity of water required by each Republic every ten days and monthly, in accordance with the crop and season, is calculated. Should there be a shortage of water for all requirements, then the available supply is allocated on a just proportional basis. The flow of the rivers and canals is controlled mechanically, thus making it possible to ensure the strict observance of the agreements reached.

The irrigation system includes power-stations, the energy of which is distributed between the Republics on the same fair and co-operative principle as the water supplies. Electricity is now being used more and more to provide light for the cottages of Kolkhoz (collective farm) members, their clubs, schools, etc., to thresh their grain, supply power for their mills and for many other needs of the rural population.

Investments in planned irrigation schemes in Central Asia started almost from the first days of the Soviets, but development became particularly marked during the first Five-Year Plan (1928–32), when some 372 million roubles were invested in irrigation works. Investments increased during the succeeding Five-Year Plans, and in spite of all difficulties during the war no less than 464 million roubles were invested. In the current (Fourth) Five-Year Plan (1946–50) 1,048 million roubles are to be invested.

Expeditions were sent out to various parts of the desert to study the water resources, rivers, etc., and to chart the best routes for the canals and the economic possibilities of the various districts. Then began the drafting of the detailed engineering plans. The cost of all this work, as well as that of the greater part of the upkeep of the canals, are borne by the Government.

To expedite the building of the canals, the collective farmers of all the Central Asian Republics have voluntarily, and indeed very willingly, released many of their members for this work. It is calculated that some 20 per cent of the farmer-members of the Kolkhozy are occupied in building the new irrigation systems, and of course while doing this work they receive their fair share of the produce of their Kolkhoz.

One of the most ambitious projects was for the building of a canal 625 miles long across the Kara-Kum desert, which would render fertile some three to four million hectares of hitherto uncultivated land. In preparation for this construction a large expedition worked on the site of the project for nine months. Using motor-cars and camels as means of transport, members of the expedition drilled deep holes in the constantly shifting sands. Sandstorms and summer heat greatly complicated the work. Boreholes of a total depth of 24,600 feet were drilled along the 280-mile tract separating the River Amu-Darya from the River Murghab. Thousands of samples of soil, rock and water were analysed. These investigations have confirmed the expediency of digging the canal on this site.

Soil students, botanists and zoologists thoroughly studied soils,

flora and the movements of quicksands along the route of the future canal.

In August 1948 it was reported that field explorations on the site of the first section of the canal which will cross the arid sands of the Kara-Kum desert had been completed. The Kara-Kum canal, which will be the biggest irrigation canal in the Soviet Union, will involve over 117 million cubic yards of earthwork.

Soviet authorities on the subject declare that it will change tremendous tracts of land beyond recognition. The water of the Amu-Darya will irrigate thousands of hectares of fertile land, which will be covered with orchards, vineyards and cotton plantations.

The Kara-Kum canal will permit conversion of arid sands into rich pastures. Ships will sail along the canal, and hydro-electric stations will supply the numerous collective farms with electricity. Scores of thousands of peasant families will move to the now waterless steppes.

Early in 1947 there were over 10,400,000 hectares of irrigated land in Central Asia. As a result, cotton plantations have been enormously expanded there, yields per acre have more than doubled and the gross harvest is over three and a half times that in those areas in Tsarist days. Many Central Asian cotton-growers have obtained world-record cotton yields.

The availability of water has also made possible a great extension of the areas under grain, vegetables and orchards, as well as an expansion of cattle-breeding and dairy-farming. Small wonder that a *Moscow New* correspondent, describing a recent visit to Central Asia, wrote:

> " In no country at no time has the face of the landscape undergone such rapid transformation as that of the Republics of Central Asia in Soviet times. Driving past the giant cotton plantations, the wheat fields or orchards that extend all the way to the horizon you find it hard to believe the stories you hear from local inhabitants about the ' valley of death ', ' hungry steppe ', ' vale of tears ', and other names given in the recent past to this once barren wilderness." [1]

This was precisely what we ourselves felt when driving through these areas.

Another example of planned socialist work of great importance in Central Asia is the way in which the threat of the shifting sands has been and is being fought. In Central Asia there are many ruins of

[1] *Moscow News*, 6.5.1947.

settlements abandoned by their inhabitants because of the constant movement of the sands. This movement was caused mainly by erosion resulting from unscientific cultivation of the land, and particularly the cutting down of trees which had strengthened the surface layers of the soil.

The Kirghiz nomads had been driven from the north with their herds to the southern semi-desert lands, where their cattle grazed the pastures bare and trampled down all vegetation. The winds now acted directly on the sandy soil and piled up the sand gradually into dunes tens of metres high, which, in their turn, were steadily shifted by the wind, and smothered all surviving vegetation.

Moving sands threatened valuable farmland on a 250-kilometre front in the Kara-Kum desert on the left bank of the Amu-Darya River in Turkmenia. Similarly, a frontage of some 100 kilometres was threatened on the lower reaches of the Zeravshan River in Uzbekistan. Rivers, canals and motor roads were in danger of being blocked by the shifting sands.

With the coming of the Soviets, resolute scientific action was taken by the State. Work began over a large area to reinforce the surface layers of the soil by a great scheme of afforestation, planes being employed for sowing the seeds. A strict system of rotating pastures was introduced, and hydro-geologists set to work to discover and chart the underground water resources of the Central Asian Republics, thus providing new watering-places for livestock and millions of acres of new pasture-land.

At the same time a special institute to conduct research on shifting sands, as well as a series of experimental stations, were organised. The local peasants and the collective farms were given every aid to fight the shifting sands. The battle against the sands has not yet been completely won in Central Asia, but it is being continued by planting hardy varieties of plants adapted to the local conditions. Saksaul, a tree without leaves and with wood heavier than water, is being planted in many areas. The shelter-belts are continually expanding. In Turkmenia millions of saplings of decorative varieties adapted to desert conditions have been planted along the Ashkhabad railway.

Although the shifting sands are still supreme outside the shelter-belts in Central Asia, they no longer present any serious danger either to the oases or the settlements. And the time is not far off when they will have been stopped completely, thanks to the energetic work and persistence of the Soviet Government and citizens of the U.S.S.R.

Central Asia, as already mentioned, is extremely rich in minerals—gold, iron, asbestos, mica, bismuth, radium, arsenic, tungsten, molybdenum and many others—but very few of these were exploited, and the actual extent of these resources was but little known. We shall deal in greater detail with all this in connection with each of the five Central Asian Republics.

The work of exploration and research never ceases, and of the eight exploring expeditions sent out in 1948 by the Council for the Study of Soviet Productive Forces and Resources to study hitherto-little-explored areas of the U.S.S.R., the largest went to Central Asia.

An interesting geological expedition in 1930, led by Professor A. Fersman, went to the Pamirs in search of lazurite—that beautiful bright-blue stone which had hitherto been obtainable only in Afghanistan. However, legend had it that somewhere among the inaccessible peaks of the Pamirs a blue stone called lazuard by the Persians was to be found, and geologists thought that such a stone deposit might well be found in this area.

"The journey," related Professor Fersman subsequently, "was perilous. A narrow, tortuous trail wound steeply above the left bank of the turbulent Shah-Darya River, and after crossing the divide at 10,500 feet above sea-level, brought us to three huts, where we left our horses and began the ascent on foot, following a mountain stream that bore the name Lyajuar-Darya, or Lazurite River.

"We toiled up the boulder-strewn mountain until, at an altitude of nearly 15,000 feet, the white expanse of a glacier appeared before us against the deep azure background of the Pamir sky. The sheet of ice was covered with huge chunks of rock that had broken off from a practically sheer cliff of marble and gneiss. And in the snow-white marble ran veins and knots of lazurite, now bright blue, now as delicately hued as forget-me-not, now with a sheen of violet or green."

After the discovery of the location of the stone a camel-track was made to the deposits, and six tons of it were brought down. Since then the U.S.S.R. has obtained a wealth of lovely coloured stones from the rich white-marble region of the Pamirs.

The industrial development of the Central Asian Republics is, of course, also based on a socialist planning system. In Tsarist Russia some three-quarters of the industry of the whole country was concentrated in four districts of European Russia—e.g., Moscow, Ivanovo,

St. Petersburg (now Leningrad) and the Ukraine—and it was part of the settled policy of Tsardom to prevent the economic and cultural development of the outlying regions. Siberia, Central Asia, the Caucasus and Transcaucasia, for instance, were to a great extent in the position of economically and culturally backward primitive colonies of Central Russia. In these regions there were few large-scale industries, quite inadequate railways and a very weak industrial working-class.

In 1929 the industry of the Central Asian Republics was still " very feebly developed ", to use the words of the Gosplan (State Planning Commission) in their *Control Figures* for 1928–29 (*Kontrolnye Tzifry na 1928–29*), and their general condition, according to Gosplan, was " characterised by their untouched vast natural resources, a traditional age-old technique of agriculture and cattle-breeding in conditions of a complex irrigation economy of oasis type: by an undeveloped factory industry and lack of experience of the local population in factory and large-scale industrial labour: by traditional forms of domestic, artisan and handicraft industry based on primitive and empirical craft technique: by the disconnected and isolated life of the individual oases and districts owing to their historical past and natural conditions (broken relief, deserts and high plateaux) and by a general poverty of life and survivals of national tribal and religious prejudices ".

The first and subsequent Five-Year Plans set out to make an end to the neglect of the rich resources of the outlying districts of the U.S.S.R. It sought to bring about a more even distribution of industry over the whole country, shifting the industries nearer to the sources of the raw materials, to eliminate the economic and cultural backwardness of the national minorities and at the same time to strengthen the defensive capacity of the Soviet Union.

The economic development of the rich natural resources of the various national Republics and districts would also relieve the transport system of the country of the necessity to carry considerable freights of raw materials, etc., from one part of the Soviet Union to another.

Whilst not neglecting to reconstruct, extend and develop the existing industrial works and to build new industries in the European parts of the U.S.S.R., it was definitely decided to assure a still higher rate of industrialisation and of general economic and cultural development for the hitherto more backward areas.

The almost inexhaustible deposits of coal in the Kuznetz basin, Karaganda and other districts, the iron ore of the Urals and Siberia, the deposits of non-ferrous metals in Kazakhstan and Central Asia generally, the valuable sources of water-power, the vast expanses of forest, the newly-discovered oil-beds, and the numerous resources of useful minerals, formed a natural basis for the movement of industry towards the east.

At the same time, and to facilitate the development of the new areas, extensive exploration work was and is being carried out. As already mentioned, numerous scientific expeditions have been organised to prospect for new sources of minerals and other raw materials, to calculate the quantities of both already known and newly discovered natural resources, and to plan the best location of industry throughout the country, so as to bring industry nearer the raw materials and fuel requirements, thus avoiding as far as possible unnecessary transport.

As a result of the settled policy of the Soviet Government, the rate of growth of industry in Central Asia during the first Five-Year Plan (1928–32) was more than three times that in European Russia. Consequently there has been a great levelling up in the economy of the central and outlying parts of the U.S.S.R., and this in its turn brought a great upsurge in the cultural development of these formerly very backward areas.

The industrial progress at the end of the second Five-Year Plan may be illustrated by the following figures. For purposes of comparison we include a third column giving the estimates for 1950:

Gross Output of Industry

(In million roubles at 1926–27 prices.)

	1913.	1937.	1950.
Uzbekistan	269	1668	2800
Kazakhstan	51	982	1300
Turkmenistan	30	293	490
Tadzhikistan	1	187	450
Kirghizia	1	170	360

An interesting development under the Soviets has been the establishment of the sugar industry in Central Asia. Before the establishment of the Soviet regime the idea of establishing such an industry there

was pooh-poohed, partly on the ground of the alleged unsuitability of the climate, and partly because it was insisted that the technique of the cultivation and processing of sugar was too complex for the illiterate Central Asiatics to master. But such arguments would merely be laughed at now both by Russians and by the native peoples of Central Asia.

The illiteracy and backwardness of the Central Asiatics are now practically things of the past, and as for the climate and soil—science finds a way where rule-of-thumb is helpless.

Sugar-beet cultivation in the Kazakh and Kirghiz Soviet Republics was started in 1929–30, and developed rapidly. During the second World War sugar-beet cultivation was also widely developed in Uzbekistan.

Beet-growing in Central Asia flourished as a result of the collectivisation of agriculture, the introduction of new technique, the mechanisation of field work, the use of fertilisers on a large scale and the irrigation of beet-fields.

Native personnel for beet cultivation have been trained in the Kirghizian, Kazakhstan and Uzbekistan Republics, and here, as in the rest of the U.S.S.R., Stakhanov methods and socialist emulation among the various beet-raising collective farms and farmers have resulted in record harvests on many a Central Asian beet-field, and at the present time sugar-beet yields are as high, and sometimes even higher, than in the old beet-growing areas.

Surveys by the Central Scientific Research Institute of the Sugar Industry show that there is every possibility of extending the cultivation of sugar-beet in Kirghizia, Kazakhstan and Uzbekistan. This will make it possible to obtain many million tons of beet annually in these Republics.

Not only have high crop yields been obtained in Central Asia, but also beet with the greatest sugar content. Moreover, the Institute has worked out a cheap method of beet preservation by air- and sun-drying, for which the natural conditions of Central Asia are specially suitable. This method has been tested on an industrial scale, and is being successfully applied on the collective farms. Expenditure on transport is reduced and losses are diminished in storing.

In conformity with the Soviet principle of developing industry as close as possible to the sources of raw material, sugar-beet factories, equipped with the most up-to-date machinery and technique, have been built in Central Asia within the last few years. Four such

factories were built in Uzbekistan during the second World War. Engineers, technicians and workers, trained for the sugar industry of Central Asia, have fully mastered the production processes and achieved excellent results.

By the application of scientific methods the production season in Central Asian sugar factories has been extended to seven or eight months, without reducing the productivity and percentage of sugar extraction.

The development of sugar production in Central Asia has relieved the railways of distant haulage of sugar, resulting in immense savings to the national economy. Coal, limestone and other materials required in sugar production are also obtained in Central Asia.

Here we must say a few words about the railways in Central Asia. In relation to area the Central Asian Republics of the U.S.S.R. are poorly equipped with railways. However, under the Soviet Power very much railway construction has been carried out. In 1913 the total length of railway lines in the U.S.S.R. in kilometres was 58,162; by 1935 it had risen to 84,300, and by January 1, 1940, to 95,000. Between the years 1928 and 1934 the network of railways in Central Asia had increased in the following proportions: Tadzhikistan, 230 per cent; Kirghizia, 130 per cent; Kazakhstan, 103 per cent; Uzbekistan, 65 per cent. This growth in the network of railways opened up new regions for industrial exploitation.

The construction of the Turkestan–Siberian railway (Turksib) was a very important achievement in Soviet railway-building, from the viewpoint of the natural difficulties to be overcome and the economic importance of the line itself. The work was begun in 1927, completed by May 1, 1930. The line, which is 1,445 kilometres in length, runs from Semipalatinsk, through Aina-Bulak, Alma-Ata, to Lugovaya, thus linking Siberia with Kazakhstan and Central Asia.

An extensive programme of railway construction is included in the first post-war Five-Year Plan, in European Russia, western Siberia and the Central Asian Republics.

Respecting the plan in so far as it affects Central Asia, I. V. Kovalev, Minister of Railways, in reply to the question: " What lines are to be built in Central Asia and where? "[1] stated:

> " The largest construction project is the equipping of the 418-km. Mointy-Chu railway. The future line will form a

[1] Interview published in *Ogonek* No. 29. July 1946.

new trans-Kazakhstan trunk-line: Petropavlovsk–Karaganda–Chu. The trunk-line will cut across the whole of Central Kazakhstan and will connect the existing Siberian trunk-line and the Urals with the Turk-Sib and Central Asia. It will shorten the haul of coal, and will lighten the load on the Turk-Sib.

"During the current year the 98-km. Dzhambul–Chulakj–Tau line, which was started during the war, will be brought into operation. With the opening of traffic on this line, it will be possible to begin the commercial exploitation of one of the largest deposits of phosphates in the Soviet Union—in the Kara-Tau Mountains.

"The 78-km. line from Bystrovka to Rybachi will be built in Kirghizia. It is a continuation of the dead-end branch line Lugovaya–Kant–Bystrovka. The construction of the line is of great significance to the Kirghiz S.S.R.: this branch will create conditions for the better mastery of the natural resources and for the wide development of agriculture.

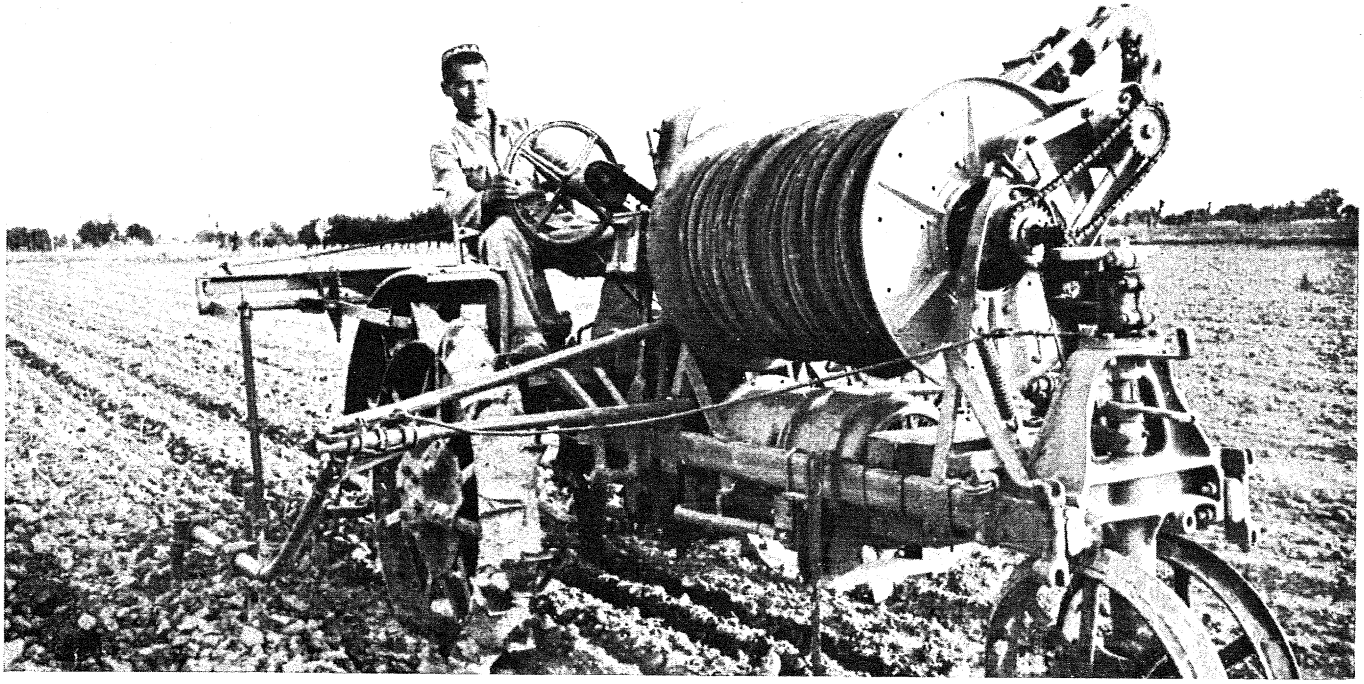
"In northern Kazakhstan a line is being laid down from Malinovoe Lake to Semipalatinsk, a distance of 152 km. This is the southern section of the Kulunda–Semipalatinsk railroad. The northern section of this line, from Kulunda to Malinovoe Lake (118 km.), was built in 1943–44."

The Minister of Railways in the interview made no mention of the construction of a new railway in Turkmenia, a linking up of the Transcaspian Line with the Aral Sea, dealt with in the chapter on Turkmenia. The map also shows the already existing railways in the Central Asian Republics.

We deal with the cultural progress of the peoples of the Central Asian Republics in the separate chapters devoted to each of them. Here it is only necessary to say a few words on the subject by way of introduction.

Literacy—which is, of course, at the basis of all cultural progress of the masses of any people—varied in 1913 from 1 to 2·3 per cent of the native populations in the territories now covered by the five Republics. "In education," said the *Encyclopædia Britannica*, "nearly everything has still to be done," and this low level of literacy and general education was one excuse for excluding the Central Asian peoples from the very limited Duma franchise and representation granted by the Tsarist Government in the Constitution of June 3, 1907.

Children grow up healthy and happy. This group are watching a children's matinée in one of the parks at Tashkent.



An electric tractor at work on the cotton-fields of the "Communist" Collective Farm in Uzbekistan. The machine is powered from a mobile transformer to which it is connected by a cable that winds out as the tractor moves away over the field.

The Soviet Government set out to alter all this in education, as in other spheres. As far back as April 1923, at the twelfth Congress of the Communist Party of the U.S.S.R., one of the important items discussed was, as mentioned in the previous chapter, the national question. Stalin in the course of his report on this subject stressed the need to take urgent steps to attend to cultural and economic inequalities among the peoples of the U.S.S.R., and laid it down as a first priority for the Party and the Government to take " every possible step to create industrial centres in the culturally backward areas—backward through no fault of their own, but because they had always been treated as mere sources for raw materials ". But, of course, centuries of neglect could not be made good within a few years, and on the eve of the first Five-Year Plan the *Kontrolnye Tzifry* for 1928–29, published by Gosplan, from which we have already quoted, referring to the cultural state of the Central Asian Republics, said:

> " Being in the recent pre-revolutionary past Tsarist colonies and Eastern despotisms, the Central Asian Soviet Republics suffer from insufficient development of mass education and sanitary and hygienic conditions of life and are distinguished by the extremely low level of general culture and particularly of municipal services."

But as in industry and agriculture, so in the domain of education, remarkable changes took place as a result of the first, and still more of the second, Five-Year Plan, so that by 1939 literacy in the different Republics varied from over 67 to 76·3 per cent, and by 1945 it varied from over 75 per cent in Tadzhikistan to from 90 to nearly 100 per cent in the other Republics.

The number of children attending school increased enormously in all the Republics. Thus, during the five years of the second Five-Year Plan (1932–37) the number of children at school (elementary, continuation and secondary) increased from 103,000 to 184,000 in Turkmenistan, from 644,000 to 932,000 in Uzbekistan (they had been 17,300, mostly Russians, in 1914), from 125,000 to 221,000 in Tadzhikistan, from 576,000 to 1,022,000 in Kazakhstan, and from 146,000 to 265,000 in Kirghizia. Equally significant were the increases in the numbers of students attending universities and places of higher education (from 18,200 throughout the five Republics in 1932 to 34,500 in 1937), and likewise in those studying in technical colleges (from 29,400 in 1932 to 48,800 in 1937).

The number of newspapers had increased from 296 in 1932 to 718 in 1937, the overwhelming majority of them in the languages of the native peoples—who in 1914 had not, of course, a single newspaper.

The number of hospital beds had increased from 23,950 to 42,000, and of doctors from 3,300 to 4,900. As a result there was in 1937 one doctor for every 3,388 inhabitants, whereas the number of doctors in Asiatic Russia in 1912 was, according to the 1914 *Russian Year Book*, one for every 37,600 villagers and one per 2,800 in the towns. And it should be borne in mind that there were comparatively very few towns, and it was in the towns that the Russian officials and their hangers-on lived; the natives lived mainly in the villages.

As regards the fourth Five-Year Plan (the Post-War Five-Year Plan) for the Central Asian Republics, we give details of this in each of the next five chapters. Here, however, it will be useful to give a very short summary for the whole of Soviet Central Asia.

This plan carried forward the aims of previous plans to produce a more balanced economy for this region.

The climate and soil of Central Asia are undoubtedly highly suitable for cotton-growing, but this does not mean that it cannot grow other produce. Its mineral resources also make it pre-eminently suitable for industrial development, and, as we have seen, this is precisely what has been done in Soviet Central Asia.

The table on p. 115 gives at a glance the targets for a number of important items set by the fourth Five-Year Plan for Central Asia as compared with the U.S.S.R. as a whole.

The fourth Five-Year Plan, whilst providing for a 48 per cent general increase in the industry of the U.S.S.R. as a whole, makes a much higher provision for the Central Asian Republics—120 per cent for Kazakhstan; 110 per cent for Kirghizia; 89 per cent for Uzbekistan; 76 per cent for Turkmenia and 56 per cent for Tadzhikistan.

In general, for Central Asia there is to be an increase of 80 per cent in the output of their locally controlled industry. In particular, there are to be very considerable increases in their output of coal, electric power, iron, steel, chemicals, and these will form an important proportion of the total production of these goods in the U.S.S.R. as a whole.

Already, as we show in succeeding pages, the Central Asian Republics have made gigantic strides economically and culturally. Already they can stand comparison with any European country of comparable

Fourth or Post-War Five-Year Plan

	Targets for 1950.		Percentage of Total for Asian Republics.
	Five Asian Republics.	U.S.S.R. Total.	
Industrial Output:			
Coal (million tons)	19·6	250	7·8
Oil (million tons)	3·5	35·4	9·9
Electricity (million KWH)	4,455	82,000	5·4
Cement (thousand tons)	325	10,500	3·1
Cotton fabrics (million metres)	220	4,686	4·7
Footwear, leather (million pairs)	16·7	240	7
Vegetable oil (thousand tons)	224·5	880	25·5
Sugar (thousand tons)	201	2,400	8·4
Agriculture:			
Sown area (million hectares)	13·1	158·6	8·3
Under grain (million hectares)	8·2	105·8	7·7
Under cotton (million hectares)	1·35	1·7	80·4
Meat (thousand tons)	152·3	1,300	11·7
Culture and Health:			
Schoolchildren (millions)	2·997	31·8	9·4
Hospital beds (thousands)	86·1	985	8·7

population, and in 1951 they will undoubtedly be numbered amongst the most progressive and leading industrial countries of the world.

We now proceed to deal with each of the five Central Asian Soviet Socialist Republics.

CHAPTER VII

THE KAZAKH SOVIET SOCIALIST REPUBLIC (KAZAKHSTAN)

FLYING from Tashkent to Alma-Ata, for the most part in brilliant weather, we had a fine view of some comparatively low mountains in the foreground; in the distance our eyes ranged over a majestic panorama of vast ranges of snow-capped mountains, whilst at times high above those ranges there seemed to jut out still loftier snow-capped heights, but as we neared them they changed their shape and finally dissolved, and we found that actually these new " heights " were only light white clouds. The mountains we passed ranged, we were told, from about 1,800 to 3,700 metres (about 5,800 to 12,000 feet) above sea level—sometimes we seemed to be quite close to them and almost on a level with them; at other times we flew above them, the hamlets deep, deep down below looking like children's toy villages.

When we flew sufficiently low we could distinguish vast sandy plains; in parts these looked like sandy wastes, in others there were natural or artificial—we could not tell which—shallow streams, and here and there were cultivated fields. We passed numerous small villages near lakes (again we did not know whether natural or artificial). As we neared Alma-Ata there were mist and clouds in the distance and it became rather cold in the 'plane. Soon we sighted villages or small towns below us, some at the foot of stately mountains. There were many streams, and extensive woods stretched from one town to the other. The 'plane crept up and up until we were again above the mountains, and the sight below was positively weird—we seemed to see sharp slopes of land with toy houses below. When we passed the mountains and descended to a lower level we found ourselves above cultivated fields, houses, roads and streams. After a flight of just under four hours, with a stop of about twenty-five minutes at Frunze, the 'plane alighted at Alma-Ata.

Alma-Ata, which, in the Kazakh language, means the " Father of Apples ", is the capital of Kazakhstan. It lies at the foot of the lovely snow-capped Alatau Mountains, and presents the appearance of a beautiful garden city with rich orchards, in which are grown the

famous large apples—some of them weighing nearly 2 lb. Other fruits—pears, peaches, grapes—are also plentiful.

On the site of the present-day Alma-Ata there was long ago a tiny town of the same name which was destroyed during the incessant warfare in these areas in the 16th century. In 1854 the Russians founded another city on this same site, which they called Verny (this in Russian means true or loyal; the Russians installed their officials and settlers whom they could trust to be loyal to the Russian authorities, as against the natives). A garrison was stationed there to guard the route of the silk trade from China and to patrol the route of the stage-coach. In Tsarist days the unpaved streets of Verny caused a thick layer of dust to cover the wretched clay-and-wooden huts on either side in summer, whilst in the spring and autumn the streets became impassable quagmires. Needless to say, there was no electricity or gas-lighting, and the nearest railway was at Pishpek (now Frunze), some 180 miles away. Of its population of about 27,000 in 1913, only 570 were industrial workers employed in handicraft enterprises, the value of the products of which was about 1,800,000 roubles.

After the establishment of the Soviet regime, the town of Verny was renamed Alma-Ata, and in 1929 became the capital of Kazakhstan.

When in July 1929 the first train from Lugovaya of the Turk-Sib Railway entered Alma-Ata, it was a unique spectacle for the inhabitants, who had never seen a railway train before.

When the nomads of Kazakhstan first saw the arrival of the constructors of the railway they were, indeed, very much alarmed. Men from far-away Russia had also come in former (Tsarist) days, and talked about a great road of iron which would make it possible for people and things to move swiftly over huge distances, but nothing had ever come of it; all that actually happened was that these men had abused and ill-treated them (the natives), had bought their sheep and horses for a song, sometimes even seizing them without any payment and galloped off.

This 1,445-km.-long railway was one of the most important projects completed during the first Five-Year Plan (the final junction of the northern and southern sections took place on April 28, 1930, and on May 1, 1930, it was opened officially for traffic). July 29, 1929, was a great day in Alma-Ata; there were street celebrations and much rejoicing, and well might the Alma-Ataites rejoice, for the building of this railway connecting Siberia with Central Asia put their town

right on the map. After the building of this railway Alma-Ata soon became an important economic and cultural centre. The population grew rapidly until, in 1939, it had reached 230,000. Its population now is over 300,000.

By the end of 1940 Alma-Ata already had some 15,000 industrial workers, whose output of manufactured goods of various kinds in 1941 was valued at some 200 million roubles. By 1940 it had a well-developed industry for processing agricultural raw materials as well as other industries, and during the war new industrial enterprises were organised there, including machine-building plants, canneries and textile factories. It has a number of hydro-electric stations supplying both light and power for domestic and industrial purposes. Alma-Ata is also an important centre of the cinema industry of the U.S.S.R.

Present-day Alma-Ata has no resemblance to the old Verny, or even to the Alma-Ata of 1927. Visitors to Alma-Ata in 1927 were enthusiastic regarding the beauty of its situation, the lovely thin, virgin-white snow in winter untrampled by cars or much other traffic, the beauty of the carpets of bright-red poppies in the spring, the glorious apples in the summer and autumn; but they noted the unpaved roads, and also that after the daylight had faded, the blackout was practically complete—the streets had no lighting of any kind. The houses were uncomfortable—no gas, no electricity, no central waterworks, no proper sanitation. In the bazaar in the centre of the town one could see the natives sitting in the mud outside or on the doorsteps of their shops, making the most of the sun whilst delousing their clothes and bodies. Malaria and many other pest and dirt diseases were rife.

What a different spectacle met us when we arrived in Alma-Ata in the afternoon of a fine, warm day. We drove from the aerodrome along excellently asphalted and well-paved roads, with splendid trees on either side and many fine modern buildings, to one of the Government rest-houses at the foot of the mountains where we put up. The next and succeeding days, on driving and walking round the town, we saw numerous parks, gardens and orchards, and our first impression of the town as one luxurious garden was strengthened the longer we stayed. Ornamenting its streets, shady avenues and parks are some 140 different varieties of lovely trees and bushes. There are fine botanical and zoological gardens.

The city now has a good water supply and sewage system, trams and buses. At night the streets are well lit. Among its numerous modern

buildings there are many new dwelling-houses, good shops, fine Government buildings, theatres, many elementary and secondary schools for about 40,000 children. It has its own university, pedagogical and medical colleges, as well as mining and metallurgical institutes and agricultural, law and other colleges. There are also a number of technical schools. The number of students in the universities and various colleges totalled 10,000 in 1946.

At the Government headquarters (Dom Sovietov) we had a long conversation with the Mayor and various members of the Kazakh Government, the town's chief architect and others. All were young or early middle-aged men; among them was only one woman. This lady, a Kazakh, has a daughter aged eleven, is a lecturer at the Veterinary Institute, works at the Academy of Sciences, and is a member of the Supreme Soviet of the U.S.S.R. We expressed our surprise that she could cope with so much work, but she explained that by systematising the work, allocating regular hours each day for dealing with letters from and interviews with her constituents, a regular time for necessary reading and study, apart from the time given to the Veterinary Institute and the Academy of Sciences, she managed to get through all her work satisfactorily and still have time to keep an eye on her household and, above all, to the education and upbringing of her daughter.

The various Ministers gave us details about the economic and cultural development of Kazakhstan, material we have incorporated in our descriptions of the Republic.

The Mayor and the architect—the latter a dapper young Kazakh who in questioning us about London's reconstruction after the war demonstrated that he had a pretty good acquaintance with the problems facing London—showed us interesting plans of the present-day Alma-Ata and its proposed reconstruction.

It had always been considered that the nature of the soil of Alma-Ata ruled out the construction of big houses. From time to time there had been avalanches of snow and debris from the mountains which had caused enormous damage. In the summer of 1921 such an avalanche had occurred and almost completely destroyed part of the town—some 15 million cubic metres of debris had had to be cleared away. However, Soviet architects and scientists, after a close study of the problem, had come to the conclusion that if proper precautions were taken it was perfectly safe to build big modern apartment and other houses. They had drawn up plans (which we inspected) for the

erection of modern houses and flats with good sanitation, bathrooms, etc.; also public baths, new schools, theatres, clubs and other public buildings. In many cases building in accordance with these plans was already proceeding. They showed us also some interesting photographs and pictures of old Kazakhstan memorials. These were being used to get new ideas, and sometimes as a basis for the architectural plans for new buildings. The new streets were to be wide and, of course, tree-lined.

A series of hydro-electric stations on the large Alma-Atinka River is transforming it into a source of power for Alma-Ata. This is freeing the town from the necessity of importing coal and saves considerable railway transport.

The whole project was started during the war to provide power for plants evacuated to Kazakhstan from the West, and envisages the conversion of a mountain lake some 2,500 metres (over 7,700 feet) above sea-level, which feeds the river, into a natural reservoir the water of which can be controlled as required.

Kazakhstan constitutes 11·9 per cent of the total area of the U.S.S.R. It is the second largest Republic in the U.S.S.R. (the R.S.F.S.R. being the largest), covering nearly 1,073,000 square miles—over five times the area of France—but its population in 1939 was only 6,145,937, as compared with nearly 42 million in France in 1936.

In Tsarist days the Kazakhs were not even recognised as a separate nationality, and were simply classed as Kirghiz. Kazakhstan as a national Republic dates from August 1920, when the Governments-General of the Uralsk, Turgai, Akmolinsk and Semipalatinsk were united to form the Kazakhstan Autonomous Soviet Socialist Republic within the R.S.F.S.R. Later, as a result of the redistribution of territory in Central Asia on a national basis completed in May 1925, those parts of the former Government-General of Turkestan in which the Kazakhs formed the majority of the population were added to Kazakhstan, and on December 5, 1936, it was admitted to the U.S.S.R. as one of its Constituent Republics.

Kazakhstan now comprises the regions of Akmolinsk, Aktiubinsk, Alma-Ata, East Kazakhstan, Guryev, Dzhambul, West Kazakhstan, Karaganda, Kzyl-Orda, Kokchetav, Kustanai, Pavlodar, North Kazakhstan, Semipalatinsk, Taldy-Kurgan and South Kazakhstan.

The Republic of Kazakhstan stretches from the Caspian and the lower reaches of the Volga in the west to the Altai Mountains in the east and from the Trans-Siberian Railway in the north to the moun-

tains of Tien Shan in the south, and is bounded in the west and north by the R.S.F.S.R., on the east by China and on the south by Uzbekistan and Kirghizia.

The most characteristic geographical features of Kazakhstan are its deserts and dry climate. Desert land accounts for some 47 per cent of the total area of the Republic. The sources of all its important rivers are outside the Republic, and, apart from the Irtysh, which flows through the north-eastern areas of Kazakhstan, they all empty into inland lakes or seas; for instance, the Ural River falls into the Caspian, the Syr-Darya into the Aral Sea and the Ili into Lake Balkhash.

In the north there are Black Earth steppes constituting rather less than 4 per cent of the total area of the Republic. The soil here is somewhat patchy, but by the adoption of scientific methods lends itself to successful cultivation. In the south there are immense stretches of desert and semi-desert, while in the extreme south among the mountain foothills there is a comparatively small stretch of very fertile soil.

But although so much of Kazakhstan is desert or semi-desert, this does not signify that much of its soil is necessarily uncultivable. The following is an interesting example:

> "Year after year Jevinsky, a railwayman, is carrying out his marvellous experiments in the clayey and sand desert at Chelkar (Kazakhstan), by the Sea of Aral. His little plot of land is irrigated by the water taken from under the sand-hills. . . .
>
> "Each square metre produces 12 kilograms of carrots. His cabbages attain a weight of 4·4 kilograms each. Each potato-plant gives 5·3 kilograms of potatoes. Many of the onions attain a weight of 380 grammes. One square metre yields as much as 2 kilograms of strawberries. Beetroot, cucumbers, tomatoes, radishes, capsicum, gooseberries, black currants, barberries, water-melons, and ordinary melons all grow here." [1]

Even now the vast deserts of Kazakhstan are very sparsely populated, but in pre-Soviet days only rarely did camel caravans break the deep silence and emptiness of the Aktiubinsk Steppes and the sandy wastes of the Kzyl-Kum and Kara-Kum deserts. The Golodny (Hungry) Steppes were almost completely uninhabited; indeed, only some

[1] N. Mikhalov, *Soviet Geography*.

twenty-six years or so ago the native Kazakhs were still nomads or semi-nomads wandering on foot or on camel's back in search of oases and of ever-fresh pasture for their cattle. Their chief occupations were hunting and cattle-breeding, and the lives they led were little, if at all, different from those of their forefathers in the days of Genghiz Khan.

Livestock breeding is an important occupation in Kazakhstan, and the Republic has immense possibilities in this sphere. In an article in *Izvestia* (June 9, 1948), J. Indasynov, Chairman of the Kazakh Council of Ministers, very justly said:

> "It is enough to glance at a map of Kazakhstan to comprehend the truly unlimited possibilities of our Republic to develop Socialist livestock breeding. In the steppes, on the rich grazing lands at the foot of the mountains and on the alpine meadows herds numbering scores of millions could find sustenance. A most important peculiarity of these pastures is that in many districts of the Republic they provide green fodder the whole year round."

Whilst some economic and cultural progress had been made by 1929, nevertheless conditions were still extremely backward. The *Kontrolnye Tzifry* (control figures) for 1929–30, published by the State Planning Commission, declared:

> "In the social and cultural sense Kazakhstan is one of the most backward regions of the Soviet Union. The semi-nomadic life of the basic population, its insufficient density, the fewness of the towns and lastly Kazakhstan's position in the past as a colonial country, determine the conditions which prevail at present in this respect."

But, as in the rest of the U.S.S.R., the first and second Five-Year Plans brought tremendous changes in Kazakhstan, both in the face of the countryside and the lives of the people.

The Soviet Government invested 1,599 million roubles in Kazakhstan during the first Five-Year Plan, of which 48 per cent was spent in the development of industry and transport. By the end of the first Five-Year Plan, Kazakhstan's industry was producing three and a half times as much as in 1927. Seven hundred million roubles were invested in agriculture. Tens of thousands of peasants united in collective farms, which were served by Machine and Tractor Stations. All

this resulted in the expansion of the sown area, higher harvest yields, and improvement in the well-being of the peasants.

By the end of the first Five-Year Plan the Kazakh people had already acquired sufficient experience to go forward on bigger construction. During the second Five-Year Plan over 4,000 million roubles were invested. By 1937 gross output of heavy industry was 170 per cent above that of 1932. The power of the electric stations was 103,200 kilowatts, and production of electric power had increased from 66·5 million kilowatt-hours in 1932 to 288·3 million kilowatt-hours in 1937. The output of coal was 4,200,000 tons, as compared with 90,000 tons in 1913, and 722,000 tons in 1932. The output of oil was 249,000 tons in 1932 and 493,200 tons in 1937. Similar progress was made in the metals, chemical and other industries.

Industry in 1937 comprised 56·8 per cent of the Republic's national economy, as compared with only 6·3 per cent in 1913; thus Kazakhstan ceased to be a purely agricultural country. It had trained a great number of experts, tens of thousands of miners, oil-workers, copper-smelters and other skilled workers for its growing industry.

But agriculture had not been neglected. We deal with the agricultural development of the Republic in later pages of this chapter.

When the third Five-Year Plan was at its height (in the middle of the fourth year of the Plan), Hitler attacked the U.S.S.R. By that time 2,340 large industrial enterprises were working full time. Dozens of big ore deposits discovered during the third Five-Year Plan expanded the non-ferrous metal base of the Republic. Food enterprises built during the third Five-Year Plan compare favourably with some leading American enterprises for capacity and equipment, while an entirely new sugar industry, with a number of large refineries, was established.

Much attention was devoted during the third Five-Year Plan to the prospecting of the natural resources of Kazakhstan; these were found to be truly vast, and hundreds of deposits of extremely valuable minerals, the existence of which had not even been suspected previously, were discovered; these include coal, oil, non-ferrous metals, salts of potassium, sulphates, different raw materials for the lacquer and dye industry. Soviet geologists also discovered large supplies of phosphorites, deposits of rare precious stones, beautiful marble, different building materials. All these riches are now being made use of on a wide scale in the national economy of the Republic.

Indeed, some of the mineral deposits in Kazakhstan are among the most important in the Soviet Union, and the Republic now occupies

first place in the U.S.S.R. for the mining of non-ferrous metals. The Karaganda coalfield is third in importance (the Donbas and Kuzbas being first and second respectively) in the U.S.S.R., and the output of the Emba oilfields takes third place (the Baku and Grozny fields being first and second respectively).

During the second World War, when the Republic became a veritable arsenal for supplying the Red Army with arms, munitions and food, extensive geological prospecting was undertaken by the Academy of Sciences of the U.S.S.R.[1] By 1946 about 90 per cent of Kazakhstan had been prospected, as compared with less than 6 per cent prior to the first World War. At the same time the industry of the Republic was greatly speeded up.

The Karaganda Basin was able to help in making good the temporary loss of the Donetz Basin by increasing its coal yield one and a half times. Oil output was also intensified, while large quantities of non-ferrous metals were supplied to the defence industry. New plants went up during the war, among them the Republic's first iron and steel works.

The industrialisation of Kazakhstan began with the building of the Trans-Kazakhstan Railway, linking up Karaganda with the Siberian Railway through Akmolinsk. Later, when the copper refineries were built on the banks of Lake Balkhash, another railway was built from Karaganda southwards to Balkhash. The total length of this line is 720 miles.

Karaganda coal—the first four Soviet coal-mines were sunk in 1930—is supplied to the Magnitogorsk Iron and Steel combine for the manufacture of coke. To shorten the route travelled by this coal another railway line was built from Akmolinsk to Kartaly, a distance of over 480 miles. Karaganda now supplies fuel for power-stations, iron and steel and non-ferrous metal plants, chemical works, sugar refineries, railways, municipal facilities, etc. Some 40,000 miners are employed in the pits of the Karaganda mines, whereas formerly there was but one mine owned by a British firm. About 98 per cent of all mining work in Karaganda had been mechanised by 1948.

[1] The whole people in the Kazakh Republic as in the other Republics of the U.S.S.R. looked upon this war as a real patriotic war: they rallied to the Government and willingly and indeed enthusiastically sent their sons into the fighting forces; they also did their utmost to speed up their industries and agriculture for the benefit of the country as a whole.

What a difference from the way in which their fathers greeted the Tsarist recruiting agents during the first World War!

Driving through Karaganda we were struck by the difference between the old and the new town, the latter of which has only developed since the commencement of the Five-Year Plans. The former consists mainly of poor, small, one-storied buildings, although we also saw there a considerable number of new dwelling-houses, schools, some offices, etc.—in the distance one could glimpse the mines. The new town, however, is very attractive, with tree-lined streets, gardens and shrubberies, extensive botanical gardens, many fine buildings, including large blocks of flats with balconies, banks, schools, a theatre, cinemas, a grain elevator, flour-mill and a number of pleasantly situated and simply but comfortably furnished Rest Homes. It is indeed, as Henry Wallace said, a " New Soviet City of white public buildings in the desert ".

When the first Soviet builders went to Karaganda, it was on horse-back or on camels; now railways stretch from Karaganda in many directions.

The town of Karaganda has a population of about 200,000, most of whom are Kazakhs, but in all there are forty-two different nationalities in the town. There are hospitals, a teachers' training college, five technical institutes, medical schools, a school of mines, many secondary and elementary schools, as well as kindergartens and crèches, libraries and research institutions.

The Karaganda railways are being electrified, and by the end of 1947 the electrification of some five kilometres running in the direction of Akmolinsk was completed. In 1948 over seven miles of tramway lines were laid down, and more planned. There is a fine aerodrome, with a regular air service to Moscow and other parts of the U.S.S.R. In the fourth Five-Year Plan over 1,000 million roubles were assigned for increasing the amenities of Karaganda.

The Mayor of the town, young, energetic and very friendly, joined us at dinner in the Rest Home where we were stopping, and gave us various details regarding Karaganda. We were particularly anxious to find out how they attracted workers to the mines, and he explained to us that the work was made attractive by the offer of good conditions of work, efficient canteens, protective clothing, etc., and high wages (and the greater the skill and the more productive the worker, the higher the wages). The peasantry of the district were encouraged to come to the mines; they were given a course of technical training; then they went down the mines. All position sin the mines were open to every worker—it all depended on the willingness of the latter to study in

technical schools, free of charge, and to perfect his skill theoretically and practically. Under such conditions they found no difficulty in recruiting the necessary labour. Many former nomads were now skilled miners.

Huge iron deposits in the north of Karaganda are estimated to cover an area of 1,200 square kilometres; its ore reserves are said to be even greater than those of the famous Magnitnaya Mountain, which feeds the biggest Urals and Siberian iron and steel works.

The ore is located in the valley of the Ayat River, in the vicinity of a railway running to Karaganda. Outcrops of the ore on the banks of the river can be obtained by open-cast methods—this has opened up new prospects for the district and, referring to this, H. Wallace recently wrote:

> "This means that in the coming decade there will rise out of the present coal town of Karaganda, 170,000 population in 1944, a great iron and steel centre comparable to towns of the American Midwest. Soviet Asia will see the rise of its own 'Pittsburghs, Clevelands, and Detroits'." [1]

Very rich deposits have also been located in Ekibas-Tuz near Pavlodar, and their exploitation was started in 1948. Ekibas-Tuz is said to have a great future, for the south Siberian trunk-line under construction in 1948 links it up with such important industrial centres as the Urals and the Kuzbas.

At the same time, industry in Karaganda, as elsewhere in the U.S.S.R. generally, and in Central Asia in particular, is being integrated with agriculture, and there are flourishing farms in the neighbourhood of Karaganda, where good crops of grain, including wheat, are raised. The winters here, we were told, were very cold; this did not harm the grain crops, but it was too cold to grow fruit such as grapes there.

During the war Karaganda forwarded flour to the front, but, in general, at present the food raised is mainly for local consumption. In this connection H. Wallace very truly remarks:

> "Part of the present strength of the Soviet position in Asia is just this integration of urban life with farming. Agriculture in Siberia is being developed along with industry, and Siberian agriculture is not being exploited for the benefit of European Russia." [2]

[1] Henry A. Wallace, *Soviet Asia Mission.*
[2] Ibid.

Again, near Aktiubinsk (on the border between Europe and Central Asia, and the first Central Asiatic town reached when flying from Moscow to Central Asia) an iron-smelting works was established during the war, and in connection with these works there sprang up a town situated amidst picturesque surroundings between two rivers, on the banks of which two- and three-storied houses have been erected. The town, surrounded by a green belt, has a good water supply and drainage. It is lit by electricity, and in the centre are public buildings, a school, club and a children's park.

Near Aktiubinsk there is also a huge chemical works, whose output of fertilisers now exceeds that of the whole of former Tsarist Russia. A new branch line of the main Kazakhstan Railway has been built beyond Aktiubinsk to connect with the Emba oilfields.

The railway which runs from Aktiubinsk into the interior of the Republic crosses the low Mugozhar Mountains, the southern continuation of the Urals, and, after touching the Aral Sea, it climbs up the Syr-Darya valley towards the south-east, crossing the Turan lowlands —an arid plain with sparse, coarse vegetation where salt-marshes alternate with sand-dunes. The railway subsequently swings south, and follows the southern frontier of the Republic among the foothills of the snow-capped Alatau Mountains. Kzyl-Orda, Turkestan and Chimkent are all stations on this line. Chimkent is the most important town in these parts, and contains the largest lead-works in the U.S.S.R., as well as modern textile and other industries.

After the establishment of the Soviet regime a railway was built running from Petropavlovsk to Karaganda via Borovoye (a health resort) and Akmolinsk. From Karaganda the railway runs south to Kounrad and the copper-smelting works on Lake Balkhash. Trains also run to Dzhezkazgan, where huge works to exploit the local copper deposits have been and are being developed.

Large phosphorite deposits discovered recently in the Karatau Mountains extend 115 kilometres, and in some parts are 25 kilometres in width. Both as regards the quantity and quality, these deposits are said to be inferior to none in the world, and their exploitation will play a great part in supplying fertilisers to the cotton-fields of Central Asia.

During the war years the industrial output in Kazakhstan increased enormously—for instance, the output of coal increased 1·7 times, the total in 1945 being 12 million tons, as against 6,972,000 tons in 1940; the output of electricity in 1945 was 1,120 million kilowatt hours, as

against 632,500,000 kilowatt hours in 1940. The output of oil increased by 13 per cent; the production of woollen cloth doubled and that of cotton materials quadrupled during the same period.

As we have noted before, some of the country's largest non-ferrous metal concerns are in Kazakhstan. In the Altai Region (Leninogorsk, Ridder), in Chimkent and at Lake Balkhash huge copper-mills have been built during the past ten years to refine the ore obtained from the near-by Kounrad mines. The smelting and refining of copper go on day and night; new buildings are constantly being put up. During the war the output of copper at Balkhash was considerably more than doubled. In the immediate vicinity of the works a new town—Balkhash—was built. In 1930, when the first builders of the copper-smelting works arrived in this neighbourhood, all they found along the banks of the desert lake were some huts inhabited by nomad Kazakhs; but in 1946 the town of Balkhash had a population of 100,000 people; here again construction work on houses and municipal amenities is proceeding apace.

The town now has many elementary and secondary schools, a technical institute, cinemas, a circus sports stadium, concert-hall and two clubs, a dramatic theatre, as well as a library, hospitals, a mechanised laundry and bath-houses. In 1947 one of the largest and finest buildings of the Republic—a House of Culture—was constructed. It has a hall accommodating 1,100 and a cinema auditorium for 480, as well as lecture-halls, reading-rooms and a large library.

The streets are being paved, sidewalks laid out and trees and shrubs are being planted along the streets, in the squares, and in all available space around the works. It also has botanical gardens, orchards and vineries.

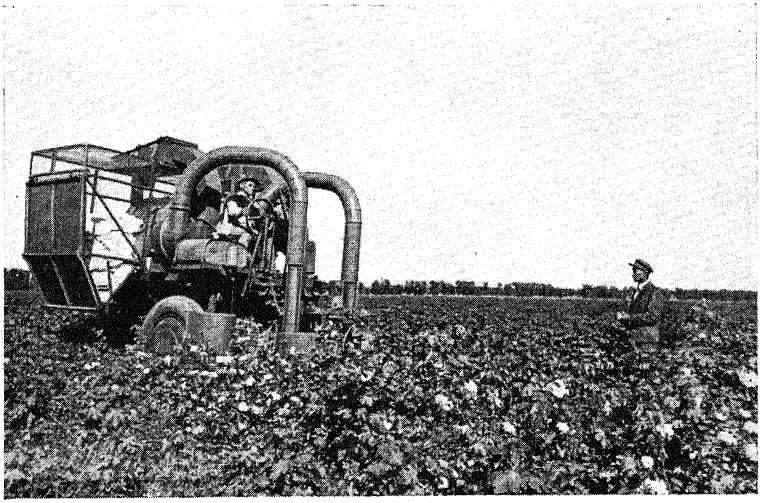
At a distance of about 124 miles north of Balkhash the construction of another copper refinery has begun at Dzhezkazgan. Copper-ore mining has begun, and one refinery is already working.

At the beginning of 1945 the first sections of the Kazakhstan Iron and Steel plant were put into operation. New coke-ovens, blast-furnaces and rolling-mills have been and are under construction.

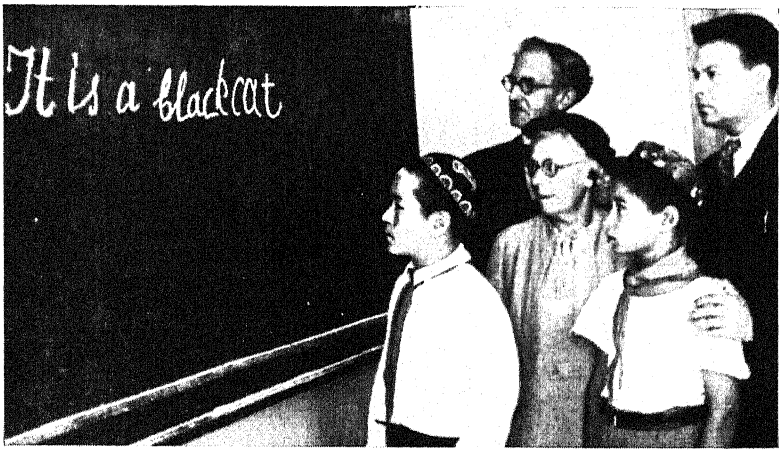
Near Lake Balkhash there are also large deposits of abrasives, and a manufacturing plant has been built. Sufficient magnesite is already being obtained to satisfy the needs of the open-hearth furnaces of the iron and steel plant mentioned above. A chemical works has also been constructed to work up the raw material provided by the rich deposits of benardite.

Right : A typical Kazakh collective farm woman—Kudyash Avnimosova, of the " Red Combine " farm.

Below : A new Soviet giant at work—the mechanised cotton picker. One of these machines does the work of 45 people.



Kazakhstan's national bard, Dzhambul.



English is taught in Tashkent schools. The authors are present at an English lesson.

The following vivid description, by a Soviet writer, M. Zagorodny, of how Balkhash was won from the desert for human habitation, is characteristic (with of course variations) of what the Soviets have done in numerous, at first sight seemingly hopeless, districts of Central Asia.

> " In the south-east of the Soviet Union stretches a chain of reed-fringed lakes of non-running water abounding in rare salts. One of them is Lake Balkhash in Kazakhstan. By its green-blue waters stands the largest copper-smelting plant in Europe.
>
> " Until Soviet man began to transform it, you would have called the yellowish plain around Balkhash the most desolate spot on earth. It was in 1929 that the geologists finished surveying the copper ore deposits.
>
> " In 1930 the first party of builders arrived, briefed to create a town in this unfriendly place. All that met their gaze was the lone tent of a Kazakh nomad and his family.
>
> " Two years later the town was there. The miners, engineers and scientists were installed in good blocks of flats. They were happy, as men and women who are doing a vast creative job for the people are happy.
>
> " But the Kazakh desert was not a kind host. The strong steppe winds scorched the town, plagued the metal-workers with grit and dust so that they longed for trees and water and cool shade.
>
> " But trees, so old-time experts had said, would not grow by Lake Balkhash.
>
> " The Soviet Government then and there laid down one and a half million roubles, and requested the horticulturists to find a way of cajoling trees to grow there. They experimented with innumerable varieties. They dug canals to drain away the salty underground waters. And at last they succeeded."

And the result is that " to-day the young city of Lake Balkhash grows not only trees, but roses, dahlias and asters, blackcurrants, gooseberries, melons and tomatoes, and has 180 acres of botanical gardens.

" Strategic outposts of chestnut and poplar, apple, pear and plum challenge the desert winds and deflect them from the city, which is steadily improving in appearance and convenience. This city grew up without slums, and will never have any."

In South-east Kazakhstan wheat, rice, cotton, sugar-beet, tobacco,

crops providing tanning agents and oils, rubber-bearing plants and fruits are cultivated. The food-packing industry has built a large number of plants in southern Kazakhstan during the past ten years or so; five sugar refineries, four distilleries, ten canneries, three starch and molasses mills, eight flour-mills, two tobacco factories, three plants producing essential oils and six huge textile mills.

As a result of this extensive industrialisation, the number of industrial workers in Kazakhstan has increased from 20,000 in 1920 to about 1 million at the beginning of 1945. But, as we said before, agriculture has also developed apace. Indeed, Kazakhstan has become quite an important grain-producing area.

There are three main agriculture zones: the northern and north-eastern, which is mainly devoted to grain and sunflower cultivation and livestock breeding; the central and south-western, which provides rich pasture for herds raised for meat and wool; the south and south-eastern—the irrigated zone and the chief area for industrial plants—cotton and sugar-beet, also rubber and other southern plants. In South Kazakhstan there are some very fine orchards.

As a result of the investments in agriculture in the course of the first and second Five-Year Plans, the organisation of State and collective farms, of machine tractor stations, the provision of fertilisers and the assistance given by agronomists, agriculture has made great strides. The area under cultivation in 1938 was 6,107,000 hectares, as compared with 4,194,000 in 1913. The area under grain crops in 1938 was 5,329,000 (3,913,000 hectares in 1913), under wheat 3,408,000 (2,533,00 in 1913) and under industrial plants 346,000 (112,000 in 1913). In pre-Soviet days there were, of course, only the simplest of agricultural implements, and very few of these. Thus, for every 1,000 peasant farms there was on an average but six sowing-drills, fifty reaping-machines, twelve low-power threshing-machines, horse-operated, and fifteen winnowing-machines.

By 1938 there were 191 State farms, 363 machine tractor stations, and 25,646 tractors and 9,522 combines were working on the Kazakhstan fields. In 1947 there were 254 State farms and 6,700 collective farms, and 12,000 combines and tens of thousands of tractors were employed on the fields.

In 1940 Kazakhstan raised 3,700,000 tons of grain, or 1,500,000 tons in excess of that in 1913; 120,000 tons of cotton—i.e., nearly eight times that in 1913—and 429,000 tons of sugar-beet, a crop never raised there prior to the Soviets.

Drought-resisting kinds of wheat have been evolved in Kazakhstan, and a new grade of winter wheat has been obtained by Kazakh agronomists which yields some 4 to 5½ cwts. per acre more than other kinds of wheat grown on the Steppes.

Early in 1946 it was reported that twenty-five field-crop and experimental research stations had been set up on the collective farms of the Kazakh Republic. The scientific workers of these stations rendered much assistance to the collective farmers in their efforts to obtain high harvests and to promote the further progress of cattle-raising.

The stations are generalising the experience of the best collective farmers and are popularising their methods throughout the Republic. Particularly well known is the Shortandin Scientific Field Crops Station in Akmolinsk Region. Here more than ten new varieties of grain have been cultivated, including the "Akmolinka" wheat, which is now very widely grown.

In 1944 the selectionists had only a few kilograms of this high-grade wheat, but in 1948 the collective farms of the north-east regions of the Republic alone were sowing "Akmolinka" wheat on about 500,000 acres.

Cotton is grown in the southern part of Kazakhstan, where it was first planted in the nineties of the last century. In 1913 about 50,000 acres were planted to cotton.

Since the establishment of the Soviet regime, cotton cultivation has developed rapidly, especially during the period of the Five-Year Plans. All agriculture in Kazakhstan was reorganised on the collective-farm system, and machines and scientific farming were introduced. The rebuilding of the irrigation system led to a rapid improvement, particularly in cotton cultivation.

The irrigation of southern Kazakhstan constitutes a big engineering job, which includes the Shaulder Dam, the Sairam-Su Dam and Canal and other canals.

The desert Bed-Pak Dala in southern Kazakhstan was here long ago. It is also called the Golodny (Hungry) Steppe, because in former days it was wholly a wilderness, where practically nothing would grow. Even to the present day—when the villages in the neighbourhood have flourishing orchards and gardens and cultivated fields of grain and cotton—the older inhabitants still speak almost with terror of the terrible desolation and hardships of life in or near the desert in the days gone by.

The Bed-Pak Dala has nearly 1 million hectares of potentially

fertile land, but water was needed to bring it to life. Encouraged and stimulated by the Soviet authorities—both central and local—the members of the Kolkhozy themselves from all over Kazakhstan went to the deserts, accompanied by agronomists, engineers, builders. They dug canals, built dams on the Syr-Darya River, planted trees and bushes along the banks. By 1948 the length of the irrigation system of Bed-Pak Dala covered some 20,000 kilometres, and over 120,000 hectares of desert land had been rendered fertile; the labour of the peasants has been rewarded. The result is that this former " Hungry Steppe " is now spoken of as a prosperous, indeed rich, territory.

One of the youngest of the Kolkhozy in the Kazakhstan deserts is the Engels Kolkhoz—but it is no longer in the desert. On all sides of this Kolkhoz, covering over 3,000 hectares, stretch fields of wheat, barley, oats, cotton, millet, maize, lucerne and vegetables.

The Kolkhoz grew up during the war, but the State spared no efforts to help it build up its prosperity. It now forms a fine typical Soviet village, with some 125 families housed in dwellings erected according to modern Soviet architectural design—they have their clubs and kindergartens.

An important role in the development of cotton-growing in Kazakhstan was played by the State farm (Sovkhoz) " Pakhta Aral ", the first big cotton-plantation opened in the " Hungry Steppe " in 1924, when the work of rendering them amenable to cultivation was only just starting. The first settlers had before them what seemed an almost hopeless task. They had to bring water, timber, iron from miles away, but with the help of the Soviet authorities they won through, and now the plantation covers 6,000 hectares and has a perfected modern irrigation system, is equipped with up-to-date machinery and farming is done on a scientific basis. It harvests some 25 centners per hectare, and serves as a model to all the Sovkhozy of Kazakhstan. This Sovkhoz extends over some 23,000 hectares. A fine town has arisen, with cotton-ginning and other plants, an electrical station, six schools, three hospitals, fourteen kindergartens and crèches. The town has good dwelling-houses, gardens and orchards.

In 1945, 250,000 acres of land in Southern Kazakhstan were planted to cotton. Over 35,000 tiny peasant holdings have been united in the collective farms, which are quite well equipped with machines.

In 1945 there were over 600 tractor-drawn cotton planters, hundreds of mechanical cultivators and other machines working on the plantations. All the processes have been mechanised.

The use of machines, mineral and local fertilisers and the acquisition of a knowledge of scientific farming have made Kazakh cotton-growing a progressive industry.

One of the measures introduced is the ploughing of fallow lands. The time taken to plant the cotton has been greatly reduced. In the early thirties the planting of cotton often dragged out to June 18, whereas now all planting is finished by May 1. Cross-ploughing and cultivating are used everywhere, so that over 60 per cent of the earth is worked over twice. All these measures have considerably increased the cotton harvests.

The seed-growing farms of Kazakhstan have developed excellent varieties of cotton, which give a good yield. Sufficient high-quality seed is grown for all the collective farms of the region. In addition to this, considerable quantities of Kazakh cotton seed are sent to cotton-growing regions in the Caucasus and the Ukraine.

Kazakhstan, which specialises in sheep-raising, has recently evolved some new breeds. By crossing the Merino with the wild Akhar mountain ram they have evolved the "Akharomerino", which is adapted to living all the year round on the mountain pastures, yields high-quality wool and good mutton, and reaches a considerable weight.

At the Republic's State farms a new breed of wool and mutton sheep has been raised, distinguished for its large amount of wool, reaching 10 to 12 kilograms annually.

In 1949 about 100 livestock farms and 930 poultry farms were set up in the Republic. In 1950 thousands of collective farms already had four to five farms each of socially owned cattle.

During 1949, 180 new Kolkhoz and inter-Kolkhoz electrical stations were set into operation. In the course of 1950 over 200 rural electric power-stations were being set in operation and over 500 collective farms will be supplied with electricity. A number of regions, including Alma-Ata, Karaganda and Dzhambul, will be completely electrified. Electricity is used not only for lighting, but cattle-farms are being supplied with 1,200 electrically-operated devices for supplying water, mixing and preparing fodder, milking and shearing. Dozens of collective farms will now do their threshing, cleaning of seeds and repair work by means of electrically-operated machinery.

In schools for the mechanisation of agriculture and in agricultural technical schools of the Kazakh Republic new experts are being trained for the running of rural power supplies.

Culturally, the progress made in Kazakhstan has been no less, if not more, striking. In 1940 allocations for social and cultural measures exceeded 990 million roubles. Villages where Kazakhs formerly lived in tents have given way to new collective-farm settlements with comfortable houses. There are modern farm buildings, clubs, reading-rooms, nurseries, hospitals, power-stations and sports-grounds. Mortality has been reduced to less than half as compared with pre-revolutionary times.

In 1914 less than 2 per cent of the population were literate; there were then about 2,000 schools in the whole territory, attended by 105,000 children; only 450 Kazakhs attended secondary schools; by 1929 there were 576,000 children attending school, but in 1949 there were 8,494 primary and secondary schools, attended by over 1,200,000 children. Before the Revolution there was only one scientific institution in Semipalatinsk, which served the Semipalatinsk and Altai regions. It was a Russian institution, organised for the purpose of Russianising Kazakhstan. The scientists who worked there were mainly Russian political exiles. There were a very few Kazakh scientists, too—but these were exceptions. Now there is a splendid Academy of Sciences, twenty-three higher educational establishments, 120 scientific research institutes and a university with some 8,000 students and eighty-nine technical secondary schools and colleges (including medical schools, language institutes, etc.) attended by 22,000 students. About 90 per cent of the population are now fully literate, and only about 1·2 to 2 per cent are wholly illiterate.

Kazakhstan has seven medical research institutes and 3,000 doctors and 12,000 other medical personnel. This compares with only ninety-six doctors over the whole of the Republic in 1914.

New educational institutions and schools are being opened year by year. No collective farm is without its school, and in winter, when the cattle are driven to the southern pastures, travelling elementary schools catering for the children accompany the drovers. Older children who attend secondary schools are provided with boarding facilities at State expense; war orphans also attend these boarding-schools free of charge.

Kazakhstan now has its own native intelligentzia—its own engineers, writers, artists, scientists. The most important scientific institution in Kazakhstan is her Academy of Science; we made a point of visiting it, and make no apology for giving a rather lengthy description of this very interesting institution.

The Kazakh Academy of Science has its headquarters at Alma-Ata, and attached to it are sixteen scientific research institutes, eight independent scientific sectors, eight scientific bases in various parts of the Republic, a rich science library and various subsidiary organisations. We spent practically a whole day looking over its various institutions, and even so had no time to see everything. Its President, a tall, broad-shouldered, pleasant-faced Kazakh—Kanysh Imantaevich Satpaiev—of peasant origin, and only forty-eight years of age when we met him, is a geologist with some fifty-two published scientific works to his credit, and is well known and highly respected throughout the U.S.S.R. His life-history is very characteristic of that of many of the young native scientists, engineers and professors in Kazakhstan, as, indeed, of the other Central Asian Republics.

Born in 1899, he had no opportunity to attend school—such schools as there were in Kazakhstan at that time were for the children of the Russian residents and officials, priests and native rich landowners. But, having a thirst for knowledge, he managed to pick up the elements of reading and writing, and at the age of twenty-two, when the Civil War was not yet concluded, he went to the Tomsk Technological Institute. Here he graduated as geological engineer, and then worked for twelve years, first as engineer-geologist and later as head and chief geologist of Dzhezkazgan geological research and prospecting expedition. Hitherto it had been thought that the copper resources of this area were not very great, but Satpaiev discovered that actually Dzhezkazgan contained the richest copper resources in the world.

During the war, under his guidance, numerous new deposits of copper, manganese, iron and coal of the greatest importance for the whole of the U.S.S.R. were discovered, investigated and many of them put into exploitation. At Satpaiev's insistence, copper-smelting works were established in Great Dzhezkazgan, thousands of Kazakhs went to schools and universities to master the trades and knowledge required for the industry and the general exploitation of the wealth of this area. Settlements were built, gardens and orchards laid out and within a few years what had been a huge wilderness, overgrown with wormwood, was being transformed into a hive of industry and a smiling, flourishing countryside.

In his large, comfortable but quite unpretentious study, and in the presence of a number of heads of the various departments of the Kazakhstan Academy of Sciences, we had a most interesting talk with

Satpaiev, in the course of which he gave us a brief outline of the constitution and work of the Academy.

The Kazakhstan Academy of Sciences started with the formation in 1932 of a Kazakh permanent base of the Academy of Sciences of the U.S.S.R., for the advancement of science and culture in Kazakhstan and the co-ordination of the study of its natural resources. Another purpose served by the establishment of the base was the training of native scientists and teachers. A number of scientists from the other Republics—Russian, Ukrainian and others—went to Kazakhstan to assist in this work, and a number of promising Kazakh students were sent to the Russian Universities to study and train for future work in their own Republic. The work of the base extended rapidly; in 1938 it was transformed into the Kazakhstan branch of the Academy of Sciences, and in November 1945 into an independent Academy of Sciences of the Kazakhstan Soviet Socialist Republic. The Government of Kazakhstan allocated 54 million roubles for its work in 1947.

The Academy engaged in a great variety of scientific work. In general, the work of the Academy is directed towards the investigation of the geological structure of the territory of the Republic, the study of the constitution and reserves of all useful mineral resources, particularly such as are of importance to the economy of Kazakhstan, the working out of the best technological processes for obtaining non-ferrous metals, fire-resisting and building materials, the study of chemical processes, of methods of producing basic chemicals, the cultivation, raising and working up of raw agricultural materials of all kinds, the investigation of astro-physical phenomena. The establishment of the extent of useful land in the Republic and of how best it can be utilised, the investigation of the water resources—rivers, lakes, both surface and underground—the study of the flora and fauna of the Republic, and ways and means of improving crops and livestock; the discovery of ways and means of combating pests and germs harmful to man, beast and plant; the establishment of the most rational geographical distribution of all forms of production in the Republic; the study of the language, literature, architecture and history of Kazakhstan and the Kazakh people.

The Academy, like Soviet scientific institutions generally, does not, of course, limit itself to the study of applied science only; its personnel have studied and are studying problems of so-called pure science, but, working in accordance with the necessities of the State economic plan, they are always ready to apply, and to help or give advice in

applying, the results of their theoretical studies to practical industrial or agricultural problems when this is required.

The Academy is divided into four sections containing sixteen institutes; the latter have eighty-seven departments, including geological, mining, metallurgy, chemical, energetics, soil cultivation, zoological, botanical, physiological, archaeological, language and literature, etc., etc.

The regular staff comprises 1,293 scientists, of whom 500 are native Kazakhs. The Academy has research bases in many parts of the Republic, and sends out numerous scientific expeditions every year to various districts of Kazakhstan. The reports and specimens brought back by these expeditions are then studied, analysed and classified in the laboratories of Alma-Ata.

To give a few examples: of prime importance in the work of the Academy is the Geological Institute. In 1926 only 6·4 per cent of Kazakhstan had been subjected to geological research, but now there are, as M. Satpaiev said, " no white spots on the geological map of Kazakhstan ".

Although it had been known even in Tsarist days that Dzhezkazgan, Kounrad and Bosche-Kul had copper deposits, it was only Soviet geologists who proved that the copper reserves of these three areas were eight to ten times the total known reserves in Russia in 1913.

Kazakhstan geologists also discovered huge deposits of phosphorites in eastern Kara-Tau; vanadium in southern and western Kara-Tau; the richest source of baryta in the U.S.S.R. in Karagaily; mercury and uranium in central and southern Kazakhstan. There are also nickel, molybdenum, tungsten and many other ores in Kazakhstan—in all, geological research has established the presence of adequate reserves of some 100 different useful minerals in the Republic.

In north-eastern Kazakhstan there are over 50,000 million tons of coal. There are also huge deposits of brown coal in western Kazakhstan, peat in northern Kazakhstan.

In the museum of the Geological Institute there are numerous samples of the various minerals to be found in Kazakhstan, and maps showing their disposition in the Republic.

The Geological Institute has also made and is making important studies of the hydrological conditions in the north-eastern areas of Kazakhstan and the water system of Kazakhstan generally—studies which are both of great theoretical and practical value in the work of irrigation.

The war, with all its disasters, gave a great fillip to the work of the Kazakh geologists—in particular the temporary loss to the Germans of the Nikopol manganese deposits, which supplied the Urals metallurgical industry, led the Kazakh geologists to undertake intensive prospecting for manganese ore in Kazakhstan, with brilliant results, and already by 1942 the Urals works started receiving manganese ore from central Kazakhstan. The geologists found that the reserves of manganese ore in Kazakhstan were sufficient to provide all the requirements both of the Urals industries and of new metallurgical works to be erected in central Kazakhstan.

The Geological Institute has collected and classified all available data regarding iron and manganese deposits in Kazakhstan, and in accordance therewith it has worked out an orderly plan for further prospecting work.

Many of the nationalities of the U.S.S.R. are represented in the Academy, including, of course, Russians. Here, hard at work, we met M. Tikhov, the oldest member of the Kazakhstan Academy, a very alert man of over seventy-one years of age. He told us that previously he had worked for many years in European Russia. " And don't you find it comparatively dull here, after spending all your life in European Russia ? "

" Dull ? " he replied. " By no means—on the contrary, Alma-Ata has renewed my youth, and I feel twenty years younger since I came here."

" What is it that makes it so invigorating and interesting here ? " we asked.

" First of all," he said, " the work is as interesting here as anywhere, and perhaps even more so. In addition to other important work, I am now supervising the erection of a new observatory, which will have the most modern equipment. Secondly, my Kazakh colleagues are most charming and helpful ; and, thirdly, the even climate of Alma-Ata and the beautiful countryside—what more can one wish for ? "

In the Botanical Institute there is an interesting laboratory for the study of the physiology of plants and its bearing on the struggle against droughts and weeds. Fine work is also being done in the laboratory of experimental biology, where they are studying the problems of increasing livestock and of how to raise new breeds which readily acclimatise themselves to conditions in Kazakhstan and yield better wools, etc. In these studies attention is paid to the experience

of old livestock-breeders who worked out their own ways and means of improving their breeds without recourse to laboratories or studies.

The Institute has some 6,000 specimens of plants found in Kazakhstan and about 90,000 specimens from all parts of the world; the director was a hearty, jolly man, probably in the fifties; he also had come from European Russia, but had been in Kazakhstan about fifteen years; he, too, was enthusiastic about the pleasant and interesting conditions of work here. He had been invited several times to go to Leningrad, but he said: "Go to Leningrad? Why? I could do nothing more useful and interesting there than I can do here. Besides," he continued, with a merry laugh, "you don't get nine months of summer a year in Leningrad!" He divides his time between the Academy of Sciences and the Kazakhstan University, where he lectures and is also chief in charge of the department for the study and classification of plants.

The chief of the Institute of the Humanities (Social Sciences), to which we paid a prolonged visit, is a Kazakh. Here they are engaged in the study of the development of the native languages of Kazakhstan and are working on the compilation of grammars and dictionaries.

They have already published Volume I of a major work on the history of Kazakhstan literature and folklore. They are also working on translations of Russian and other classics, particularly Shakespeare for the theatre.

The works of Abai, the greatest Kazakh national poet, thinker and popular leader, are being reissued. Abai, of high-born native stock, devoted his whole life and poetical talent and thought to the defence of the common people against both native and foreign exploitation and oppression. He lived in the 19th and 20th centuries (1848–1904), when the sufferings of the native Kazakhs were perhaps worse than at any previous period of their history. Another great national poet whose works have been and are being collected and published, Dzhambul, was more fortunate, in that, although he too suffered oppression at the hands both of the Tsarist officials and the rich native beys, he lived to see happier days. When Dzhambul was born in the Kazakh steppes, his people had neither a literature nor even a written alphabet of their own. Across the vast steppes of southern Siberia and the central part of Middle Asia the Kazakh shepherd tribes wandered from pasture to pasture. Urban civilisation and farming were entirely unknown to them. Droves of horses and herds of sheep constituted all their possessions. Their poetry was comprised of innumerable songs sung at stopping-places, and passed on from generation to generation.

Particularly gifted minstrels, who memorised the best poems of the past, were greatly honoured by the people, and were the pride of their respective tribes.

Dzhambul's gift for improvisation made him first the pride of his clan, then of his tribe, later of all Kazakhs, and finally, after Kazakhstan became a Soviet Republic, he took a foremost place as a poet of the U.S.S.R.

In the course of his long life, Dzhambul is said to have composed no fewer than half a million lines. Before 1917, however, when the Kazakh written language was just taking form, the songs of the renowned bard went unrecorded. Thus a good deal of Dzhambul's poetry is lost to posterity. Indeed, all that remain of many of his poems are the recollections of old men of how greatly his improvisations influenced the minds of the Kazakhs of the last century.

Dzhambul, who was born in 1846 and died in 1945, himself said that he only began to live a human life when he was past seventy-five years of age, with the establishment of the Soviet regime in Kazakhstan. On May 20, 1938, he declared:

> " All around me life is pulsating—it is the life of which I sang in my best songs as of a golden dream. Life has begun for me anew. I feel I have been reborn, and now I sing again as I did when I was a twenty year-old youth."

Dzhambul greeted the union of the Kazakhs into a united homogeneous Republic by writing several magnificent poems, which were recorded and published in the Kazakh language and subsequently translated into Russian. He has written many other stirring poems, including poems dedicated to Gorky, Pushkin, Suleiman Stalsky, and a song about Lenin and Stalin. In addition, among his most noted songs of Soviet times may be mentioned his " Song about Moscow " and his war poems, " The Song of Wrath ", " Leningrad ", " My Children " and many others.

Among the other Institutes of the Academy we visited were those of Energetics, where they are studying energy available from the water resources of the Republic and problems on the use of gas in internal-combustion motors; the Institutions of Chemistry, Experimental Biology, Architecture, History, Soil Cultivation, etc. We shall deal with the work of some of these later. The laboratories of the various institutes are for the most part well equipped. Many of the workers are young men and women of all nationalities of the U.S.S.R., but a

large number are native Kazakhs. Many of the heads of the various laboratories are women.

In one of the laboratories of the Mineralogical Institute the lady in charge was a charming, highly intelligent Russian. When we asked her, as we did other Russians, how she liked working in Kazakhstan, she replied that she loved Kazakhstan generally, and Alma-Ata in particular. " Moreover," she said, " my husband is a Kazakh," and, turning to M. Satpaiev, who was showing us round, she added with a laugh, " Allow me to introduce him."

She had met Satpaiev when he was studying in Tomsk. Later she took part in some of the scientific expeditions organised by the Kazakhstan Academy of Sciences. She had now been in Kazakhstan for seventeen years. " Apart from the fact that my husband is a Kazakh, I feel this to be as much my native land as any other part of the U.S.S.R.," she said. This was a sentiment repeated to us over and over again by Russians, Ukrainians, Byelorussians and others whom we met in various towns of Central Asia.

Kazakhstan scientists have compiled soil-maps of the Republic, thus helping to establish new possibilities for the full utilisation of the riches of the soil. An exhaustive study has been made of the flora of Kazakhstan, which includes 3,000 different varieties of plants.

In 1948 the Kazakh Academy of Sciences sent out fifty-three prospecting parties to various districts of Kazakhstan. In order to erase " white spots " from the soil-map of the Kazakh Republic, an expedition of the Soil Institute, exploring deserts and highlands, was estimated to have covered a distance equal to that between Alma-Ata and Berlin.

Great successes have been registered in livestock breeding: new, highly reproductive breeds of cattle have been raised, and effective methods of combating epizooty have been elaborated.

In the Institutes of Energetics and Geology (the latter has attached to it an excellent geological museum, where we inspected some fine detailed maps of the distribution of minerals, etc., in Kazakhstan) there are maps showing the natural characteristics of the soil of the Republic. Here we had lengthy talks with a number of the scientists on the question of irrigation, which is of such immense importance to all the Central Asian Republics.

We were informed that actually, after careful study of the Central Asian rivers and general water resources, it was found that there was plenty of water available for the provision of hydro-electrical energy and for irrigation, and Kazakhstan and other Central Asian Republics

are very rich in subterranean water. Geological research, for instance, has shown that there are extensive zones of subterranean waters in the Kara-Kum desert, and wells and water reservoirs have been constructed there. Already huge tracts have been irrigated by the diversion of rivers and the utilisation of underground water; and land which seemed to be desert or semi-desert has been found to be exceedingly fertile for use as pasture-land and for cotton, grain and other crop cultivation, when given the water for which it was thirsting.

Great projects are being worked out, and some have already started, for the thorough irrigation of the whole of the Golodny Steppe (Hungry Steppe). The Syr-Darya River skirts this desert, but its waters only reach the fringe of it. Accordingly, large reservoirs have been and are being constructed on the river, thus directing its waters to the Golodny Steppe, and rendering larger and larger areas fertile. In addition, deep wells have been sunk, thus opening up large tracts for use as pastures and making possible an unprecedented increase in the herds of livestock.

We also discussed the subject of irrigation with the scientist who is the Minister for Water Economy, and we asked him whether he thought the whole of the desert lands of Central Asia could be irrigated.

"Undoubtedly," he replied. "There is plenty of water underground; all that is necessary is study and work, and then study and more work."

"And if that is done," we enquired, "the Central Asian Republic could support a much larger population?"

"Certainly," he said. "At present the total population of the five Republics is less than 20 million; if most of the desert were cultivated we could support a population of at least 120 million—probably much more."

And both he and the other scientists of the Academy were emphatic that they could and would do it.

We then ventured to ask whether he thought that the Sahara—where it has been reported that the desert is actually still increasing—could also be irrigated by the utilisation of underground water resources. He was not dogmatic in his reply. He said: "The problems are different—one cannot apply ready-made methods which have been successful in one set of circumstances to another case where other problems may arise. But I certainly think if careful investigation were made and scientists applied their minds to it, a solution for rendering the Sahara fertile could in all probability be found. But it

would require much patience, effort and ingenuity, and of course a lot of money."

Among the least-studied areas of Kazakhstan, the Naurzum preserve (one of five similar preserves in Kazakhstan) was organised in 1933. Here a close study is being made of the soil, flora and fauna of the Steppe land, or, as they are called, " inland forest tracts " in the plains. The numerous local lakes and water-fowl, best methods of afforestation, etc., are also being studied.

In 1947 an expedition under Professor A. Formozov joined the scientists of the Naurzum preserve in the study of the peculiar phenomenon of the disappearing lakes in this district. These lakes alternately fill with water, and good quantities of fish appear, then after a time they dry up, although there are no visible outlets.

By 1938 and 1939 the lake areas constituted saline marshes overgrown with reeds, but in 1940 they filled up with water, and in 1941 good fishing was possible. But in 1947 the level of the water was falling again.

The rise and fall of the water might be explained by the fluctuation of the quantities of snow in the spring and the intensity of evaporation in the summer, but why the disappearance and reappearance of the fish? The explanation may be that the Naurzum lakes are connected by subterranean passages, the waters of which provide a refuge for the fish. The question is interesting both from a scientific and economic point of view, as the presence and absence of water affect the migration of water-fowl.

At Alma-Ata we also visited the University, which was founded in 1934, and in 1946 had some 1,400 students, of whom 670 were Kazakhs, the rest belonging to various nationalities of Central Asia and of the U.S.S.R. generally, including Russians. About 400 to 450 graduate from the University annually. The University was in temporary quarters in 1946 (a new University building was being erected), was straggling and very cramped for space, but it has twenty-six fairly good laboratories, also reading-rooms, libraries, and its own printing-works. Living-quarters are also provided for students who come from towns other than Alma-Ata. The students pay 300 roubles a year, but are granted a scholarship of 150 roubles a month.

In 1950 there were in Kazakhstan over 4,000 libraries, 6,000 clubs, forty theatres, 1,200 cinemas, twenty-five museums; some 350 newspapers are published.

The health services have also made remarkable progress. Up to

1917 there was no organised public-health service in any of the semi-colonial regions of Russia, including Kazakhstan. Now over 250 polyclinics have been opened in the towns and 1,200 out-patient centres in the rural areas; hospitals with accommodation for 13,000 patients and sixty modern welfare centres for women and children. In Kazakhstan today there are 3,000 doctors and about 5, 000 assistants, and a large number of trained nurses.

Medical air stations have been set up in each of the Kazakhstan regions, and steps are being taken to extend to the utmost limit the medical air service to the remote and sparsely populated districts of the Republic.

Some of their hospitals really are very good indeed; one such which may be described as average—there being some not so good and some better—made an extremely favourable impression on us. It was organised in 1934, and has some forty receiving-rooms and 105 beds. The doctor-in-charge, K. B. Erastov, has three Orders of Merit and is a Deputy to the Kazakh Supreme Soviet. He is a rather short, dapper, young or early middle-aged man, wonderfully energetic, cheerful and charming, evidently on the best of terms with his staff and patients. He showed us round, and remarked that the equipment was not as good as he would have liked, but he was going to Moscow soon, and hoped to get some new apparatus and appliances there. He introduced us to the various heads of the departments, many of them young Kazakh women.

The hospital was beautifully clean, and to our lay eye, at any rate, it seemed not at all badly equipped for operations, for ultra-violet light and electrical treatment, and for dental, tubercular, stomach and other patients.

What struck us as particularly good were the wards, which each accommodated a maximum of four patients, and in many cases only two or three. The Director said they found this arrangement much better for the patients than large general wards. They were bright, cheerful, roomy, with adequate space between the beds. There were special children's wards, isolation wards, etc. In the out-patient department there are different reception-rooms for different diseases.

The hospital also has special dining-rooms for workers who are well enough to work but need treatment and a special diet; they pay for their food, but not for the treatment.

Among the patients was an American, with whom we had a long

talk; he was full of praise for the excellent treatment he had received at this hospital.

While in Kazakhstan we visited a number of theatres and cinemas. As in the other Republics, there are theatres conducted in the Kazakh and Russian languages, as well as in the languages of the other Central Asian Republics. For our visits we invariably chose those conducted in Kazakh. Needless to say, there was no national Kazakh theatre in pre-revolution days. This made the sight of the fine edifice of the Kazakh national theatre in the centre of Alma-Ata all the more impressive. Here are presented in the Kazakh language plays, ballets and operas based on the legends and stories of their ancient folk-lore. Many of these deal with the exploits of legendary heroes, such as Er-Targyn, Koblandy, or with heroes who led the more recent struggle for liberation from feudalism, such as Amangeldy, or with scenes from the life of the great national poet, Abai. Some are lighter, purely love-stories, such as Kyz-Khibek, etc. The repertory of the theatre also includes some of the best Russian, Georgian, Italian and other operas, all given in the Kazakh language. We also saw an excellent production of " The Taming of the Shrew " in Kazakh; the décor and costumes were not up to the level of the British stage, but the acting was superb.

Among the theatres we visited was a newly-constructed children's theatre. It contained a large auditorium, two fine foyers, all very artistically decorated, each in a different style.

There was also a concert-room—often plays and concerts for children are given simultaneously and, needless to say, the children are mostly accompanied by adult relatives. Mothers also often have to bring very young children with them, and, in order not to spoil the entertainment for them and the older children, a special playroom is provided amusingly decorated with bright colourful pictures, among them some showing dear little bunnies brushing their teeth and saucy teddy-bears washing themselves behind the ears. There are also many toys, picture-books, etc. A nurse is in attendance, and the tiny tots are left in the playroom while the mothers and older children attend the play or concert.

The theatre also organises children's theatrical, musical and reading circles, etc.—all this is not for the privileged few, but for the children of the native people, who, or whose parents and grandparents, some thirty years ago, were still nomads or serfs under the iron heel of their own beys or their Russian Tsarist overlords.

In the State conservatory of Alma-Ata about 75 per cent of the students are Kazakhs. In addition to the usual orchestra, piano, vocal, composition and theory departments, the conservatory also has a department for the study of Kazakh instruments. There is, further, a Kazakh State Philharmony, which has an extensive programme of activity. In 1946 it arranged some twenty-three symphony concerts featuring the works of Kazakh and Russian composers. The Philharmony also presents other classical music, including Beethoven, Mozart, Haydn, Schubert, Schuman, etc.

Finally a few words regarding the fourth Five-Year Plan for Kazakhstan. As in the U.S.S.R. generally, this is an ambitious but, given the drive and determination so vividly displayed by the people of Kazakhstan, a quite realisable programme of development in every sphere of economic and cultural activity. Here it is only necessary to give a very brief outline of the principal provisions of the Plan.

Capital investments in Kazakhstan in 1946–50 are laid down in the Plan as 8,800 million roubles, including 737 million roubles for works under the Republic's jurisdiction.

Among the enterprises to be set into operation during the five-year period are: seventeen coal-mines with a capacity of 6,500,000 tons in the Karaganda coal-field, four coal-mines with a capacity of 270,000 tons in the Aktiubinsk field, and an open-cast working with a capacity of 600,000 tons of coal in the Ekibastuz field; coal-mines, under the jurisdiction of the Republic, with a capacity of 400,000 tons; cement works, with a total capacity of 530,000 tons, and the Kara-Tau ore-mines; the existing superphosphates plant will be expanded and a new one built; eight meat-packing and refrigerating plants, 200 butter factories and two milk-canneries. The construction of the Kazakh steel-mill to be completed and the erection begun of an iron and steel works; electric power-producing capacity is to be increased by 398,000 kilowatts, including 104,000 kilowatts at hydro-electric stations.

Meaures will be taken to ensure the operation at full capacity of the agricultural machinery works, the leather factory in Semipalatinsk, and the spinning-mill in Alma-Ata.

The output of copper in 1950 to be 2·6 times, and the output of lead 1·3 times, the 1940 output; the production of zinc and electrolytic copper will be started. The amount of copper ore obtained from the Dzhezkazgan field is to be considerably increased, and the raw materials supply of the Chimkent lead works reinforced.

In 1946–50 industrial resources of iron ore amounting to 100 million tons in the Atasuy and Karkaralinsk fields, copper amounting to 813,000 tons in the Dzhezkazgan, Irtzsh and Boshche-Kul fields, industrial resources of lead, molybdenum, tungsten trioxide, barites and phosphorites in the Kara-Tau field, as well as borate and gypsum, are to be prepared for exploitation. Fifty-nine sites will be prepared for the sinking of coal-mines with an aggregate capacity of 35 million tons, including 23,900,000 tons of coking coal, in the Karaganda field. The industrial petroleum resources will be increased by 1,080 well sites. A new raw materials base to be built up for the soda industry.

The following are a few items of output in 1950:

Steel (tons)	72,000	Footwear (pairs)	6,800,000
Coal (tons)	16,400,000	Hosiery (pairs)	14,400,000
Petroleum (tons)	1,200,000	Fish catch (tons)	97,500
Elec. power (thous. kwh.)	1,810,000	Vegetable oil (tons)	21,500
Superphosphates (tons)	280,000	Meat (tons)	100,000
Cotton fabrics (metres)	19,100,000	Butter (tons)	19,000
Woollen fabrics (metres)	2,880,000	Granulated sugar (tons)	71,000

Industrial output by enterprises under the Republic's jurisdiction in 1950 is fixed at 1,300 million roubles, of which the output of State industries under local jurisdiction and of industrial co-operatives is to comprise 370 million roubles.

Estimated area under crops will amount in 1950 to 7,286,000 hectares, of which 6,002,000 hectares are to be on collective farms; the area sown to grain crops 5,336,000 hectares, including 4,681,000 hectares on collective farms; the area sown to industrial crops 340,000 hectares, including 316,000 hectares on collective farms; the area sown to melons, potatoes and other vegetables 280,000 hectares, including 105,000 hectares on collective farms; the area sown to fodder crops 1,330,000 hectares, including 900,000 hectares on collective farms. The area sown to cotton 85,400 hectares. The planting of high-grade tobacco varieties is to be extended.

Livestock by the end of 1950: horses, 1,516,000, including 1,191,000 on collective farms; cattle, 4,400,000 head, including 2,300,000 on collective farms; sheep and goats, 19,050,000, including 15 million on collective farms; pigs 392,000, including 202,000 on collective farms.

Irrigation systems on an area of 200,000 hectares are to be reconstructed and the more economical utilisation of irrigation water ensured. Small irrigation systems are to be built on a large scale, with a view to creating emergency irrigated areas on collective farms

in the northern and steppe areas of the Republic, as well as small reservoirs for the irrigation of arid districts.

To ensure an adequate supply of water for the industries and populated localities of the Karaganda and Dzhezkazgan industrial areas, the serviceable capacity of the Samarkand reservoir on the Nura River is to be enlarged and a reservoir built in Dzhezkazgan on the Kenghir River. The construction of the Kzly-Orda dam, with a canal on the left bank, is to be begun.

During the five-year period 956 kilometres of new railway lines and 807 kilometres of second tracks are to be put into operation.

The plan of State-owned housing accommodation in the towns of the Kazakh S.S.R. to be made available for occupation in the period 1946–50 is fixed at 2,170,000 square metres, including 45,000 square metres to be made available by local Soviets.

The main assignments in the spheres of cultural development and health services are as follows: by 1950 the number of schools is to reach 7,985, with an attendance of 1,130,000, and the number of hospital beds 34,000.

CHAPTER VIII

THE KIRGHIZ SOVIET SOCIALIST REPUBLIC (KIRGHIZIA)

THE Kirghizian Republic is situated on the high range of the wild, picturesque Tien Shan Mountains (" Heavenly Mountains "), several of whose snow-capped peaks reach the considerable height of over 22,000 feet. It is bordered on the east by Sinkiang (Chinese Turkestan), on the north by Kazakhstan, on the south by Tadzhikistan and on the west by Uzbekistan and Kazakhstan.

The great mountain range of Tien Shan—which stretches far into China and, together with the foothills, occupies the greater part of Kirghizia—has many glaciers, extensive table-lands, deep valleys, and is the source of many rushing rivers.

The total area of the Republic is 196,900 square kilometres (76,900 square miles), and its population on January 7, 1939, was 1,459,301. The economic make-up of the country can be somewhat gauged from the fact that 1,188,714 of its inhabitants live in rural areas. This territory, originally an independent Moslem Khanate, fell to Tsarist armies in the early sixties of the 19th century, and the conquest was followed by the usual influx of Russian officials, merchants and settlers.

The Kirghizian people had now to carry a double yoke—i.e. that of the foreign conqueror and their native feudal lords, the Manaps. The Manaps and the big cattle-owners, the Beys, collaborated with the Tsarist overlords; the individual Manap simply purchased the office of " District Governor " from the Tsarist representative, and he was then undisputed lord of his domain, with unlimited powers for three years.

At that time the Kirghizians devoted all their energies to tending their herds of horses and flocks of sheep; they were always on the move in search of new pastures. They lived in clans ruled by their elders (" Aksaks ") and feudal lords (" Manaps "), who in turn, as just mentioned, were subject to the Tsarist representatives. Only a few plots of land widely scattered over the countryside were cultivated.

Although the country is rich—in fact, very rich—in minerals, industry in Tsarist times was practically unknown. What there was

consisted of a few primitively run mines and fifty handicraft enterprises for processing agricultural raw materials. The territory of the present-day Republic, although inhabited mainly by Kirghizians, was at that time divided between two Governments-General—i.e. Central Asia and the Steppe. The Kirghizians are mainly of Tiurk origin. At the time of the "November" Revolution they did not have a written language. The country was 98 per cent illiterate and, as elsewhere in the Tsar's dominions, Russian was the official language.

It may well be asked how national culture and national traditions are preserved among a people not possessing a written language. The answer is, in large measure by their bards. In the famous epics, the "Manas and the Manaschi", consisting of some thousands of verses which have been handed down from generation to generation, are preserved the fighting history of these people, their struggles, defeats and victories. We shall return to the subject later in this chapter.

To sum up the situation in Tsarist times: a talented people was blinded by illiteracy and fettered by its own feudal lords and Tsarist officials; the potential agricultural wealth and water-power of the country were only slightly exploited and the immense mineral wealth slept undisturbed beneath its soil.

The "November" (1917) Revolution was not "a" but "the" historic turning-point in the annals of this little-known people. At first Kirghizia was part of Soviet Turkestan, and for a time, during the Civil War, was cut off from Soviet Russia. In April 1921, after the defeat of the "White" Armies, Soviet Turkestan became an autonomous Soviet Socialist Republic within the R.S.F.S.R. (Russian Soviet Federated Socialist Republic). In 1924, when central Asia was reorganised territorially and the new States were established, Kirghizia was separated from Turkestan and constituted as an autonomous region within the framework of the R.S.F.S.R. That indicated considerable progress in self-government in a few years among a people who began the steep climb, fettered by many handicaps. But it was only a beginning, although a substantial one.

On February 1, 1926, the Government of the R.S.F.S.R. elevated Kirghizia into an Autonomous Soviet Socialist Republic within its jurisdiction, and finally in December 1936 the Eighth All-Union Extraordinary Soviet Congress—which adopted the Stalin Constitution—proclaimed Kirghizia one of the Constituent Soviet Socialist Republics of the U.S.S.R. Truly a remarkable record of political development in less than two decades. Naturally, political and con-

stitutional development proceeded side by side with agricultural, industrial and cultural development, each reacting on, stimulating and helping the other.

At present the Kirghiz Soviet Socialist Republic consists of the Dzhalal-Abad, Issyk-Kul, Osh, Talas, Tien-Shan and Frunze regions.

We shall deal with agriculture first, because Kirghizia is essentially a cattle-raising and agricultural country. Here, as in the other Central Asian Republics, the extension of irrigation meant the development of agriculture. By 1937 about 450,000 hectares of land had been irrigated; in 1939–40 Kolkhoz members had constructed twenty-five irrigation canals with a total length of 289 kilometres, and by 1940, 752,000 hectares were irrigated.

Development was checked by the war, but it was soon in full blast again. A representative of *Moscow News* who visited Central Asia to report on the development of irrigation wired his paper:

> "Irrigation development in Kirghizia, which was likewise interrupted by the war, has also been resumed on a big scale. Along with the Orto-Tokoi Reservoir in this Republic, which will have a capacity of about 500,000,000 cubic metres of water, two branches of the Great Chu Canal, totalling 295 km. in length, are being built, as a result of which the irrigated area will be doubled and then trebled."

Note those significant words: "doubled" and "trebled". The correspondent continued:

> "The Chu is now being spanned by a dam 340 metres long and 54 metres high. To withstand the pressure of the swift current and possible earthquakes in this area, the base of the dam is being made more than half a kilometre wide and will gradually taper off to a width of 15 metres on top.
>
> "When the reservoir fills with water a new lake 12 km. long will appear on the map of the Kirghizian Republic and the yellow expanse of desert land will recede before the green of the fertile valleys."

When these projects have been completed the irrigated area will be immensely larger than in pre-revolutionary days.

What crops are now being grown and what are the yields? The answer to the first part of the question is that the Republic now raises sufficient wheat for its own use, and also grows other grains and fodder,

especially lucerne. In 1943, for the first time, barley was sown at high altitudes close to the pastures. Although prior to the Revolution no sugar-beet was grown here, the Republic has now the highest yield per hectare in the U.S.S.R. In addition, cotton, tobacco, hemp and other industrial plants are raised. In 1947 ten different kinds of wild rose-bushes rich in vitamin " C "—over an area of 172,000 hectares covered with wild fruit and nut-trees—were found. Experts discovered that one kilogram of dry hips yields 2,360 to 3,040 doses of pure vitamin " C " : a valuable find.

As to yields—at an Agricultural Exhibition in Frunze (the capital) in October 1947 the Deputy Minister of Agriculture, Kolbayev, gave the following revealing figures: a number of collective farms had raised a cotton crop amounting to from 3 to 3·5 tons per hectare; some collective farms were harvesting a sugar-beet crop of as much as 60, 70 and even 80 tons per hectare, and some collective farms had reaped wheat crops of from 2·5 to 3 tons per hectare. These figures, of course, reflected not the average, but the best results; nevertheless, they show what can be done, and they constitute an incentive to the less advanced collective farms. M. Kolbayev said to a correspondent:

> " We are out to lead the field in high yields of all crops. The farm exhibition, whose aim is to organise exchange of experience among collective farmers on a broad scale and to help promote emulation in raising high yields, will contribute towards reaching this goal."

The former nomads have now become good tillers of the soil, not even second to the experienced cultivators of the Ukraine.

The organisation of the Kolkhozy played a decisive role in reaching these satisfactory results. At first the peasants were hesitant and distrustful, but concrete gains finally won them over to the new conceptions.

In May 1947 a Soviet newspaperman, Boris Krinitsky, thus relates the history of one of the Republic's collective farms named " Kenesh " :

> " Let me tell you the story of a small village inhabited by the members of one of Kirghizia's 1,500 collective farms.
>
> " ' Kenesh ' it is called, which is Kirghiz for ' friendship ', and it is situated a few hours' ride from Frunze, the capital. The first to settle down here was a former nomad called Izak Kochkorbaev. He ploughed up his allotment in 1922, and by the time he was reap-

ing his first harvest a whole village had mushroomed around him, as his former nomad comrades had followed his example. In 1929 they organised the collective farm. When they had pooled their resources they found that they had a sizable area of cultivated land, 400 horses of the small Kirghiz breed and 360 sheep. By the time of my visit, the farm had 776 horses, all of whom trace their lineage back to pure English thoroughbreds, and 11,000 fine-fleeced sheep. The prosperity of the farm today may be judged by the fact that last year it sold the State some 850 tons of grain, 23 tons of meat and 48 tons of milk.

" Introducing me to the farmers, the 57-year-old first settler Kochkorbaev, who, incidentally, has been the farm's chairman since its foundation, pointed out three shepherds who had been given 70–90 lambs each in 1946 as rewards for bringing up a good flock of lambs. The three shepherds now own more sheep than the entire collective farm possessed 18 years ago.

" The interests of the country's five-year plan loom large for the Kenesh farmers. But they have their own five-year plan besides. By the end of 1950 the farm is to have its own power-station. By that time it will possess 900 horses, 15,000 sheep and 700 head of cattle. The grain harvest will be increased considerably, and Kochkorbaev showed me a plot of 65 acres where an orchard and vineyard are to be laid out."

Krinitisky concluded: " The story of the Kenesh Collective Farm is the story of the Kirghiz peasantry as a whole."

That is the story of one typical Kolkhoz. The correspondent summed up the general position thus:

" The transformation began when over 11 million acres of the best lands which once belonged to the Manaps were given back to the peasantry. Moving down again into the fertile valleys, the peasants were able to take up agriculture. Given every encouragement by the State, the former nomads settled on the land and gave up their wanderings. From year to year the nomad camps grew smaller and smaller and in their place arose new towns and villages, and the people of whom it had once been said that they were ' born in the saddle ' were finally able to dismount and lead a happy existence."

However, the mountains are today also making their contribution to agriculture. The correspondent continued:

> "As in the valleys, the mountains have their irrigation canals, and agriculture, that was thought highly improbable in this part of the world, has become a component part of the highland economy. As a matter of fact, more than 150,000 acres of land are cultivated here."

It may be remarked that the climate varies remarkably in Kirghizia. For instance, when there is sunny, spring weather in the Chu Valley, a few hundred kilometres away in the mountains snow lies thick on the ground.

An experimental fruit and vegetable station is working in Kirghizia, with a view to adding vegetables, berries and fruits to the diet of the Tien-Shan livestock breeder, to push northward the abundance and variety of fruits cultivated in the southern parts of the Republic, and to arrest the degeneration of fruits and vegetables in the valleys. In solving these problems it is drawing on the remarkable researches of Michurin, Lysenko, Tsitsin and their numerous followers.

Much has already been done. The station has raised bunches of grapes weighing several kilograms, apple-trees so heavily laden with fruit that their branches touch the ground, huge potato tubers, and water-melons that only a strong man can lift.

Growing on the station's experimental fields are 200 varieties of apple, including Michurin, Central Asian, Crimean, Caucasian, European and Californian, all of which have not only become acclimatised to their new surroundings, but are yielding rich harvests under the Kirghizian sun.

In 1947 the station evolved a variety of strawberry the colour and size of a small tomato. The station also supplied collective farmers with over 3 million seedlings of raspberry, strawberry and other berry bushes.

By 1941, 99·9 per cent of all the peasant farms had joined the Kolkhozy, and in 1947 there were 1,500 Kolkhozy, fifty-two Sovkhozy and sixty-five machine tractor stations. In addition, the collectives had at their disposal over 5,000 tractors, thousands of harvester-combines, 600 threshers, over 3,000 tractor-seeders and some thousands of motor-trucks. The total area under cultivation in 1937 was about 2,500,000 acres, and by 1942 this had reached over 3 million acres. Of this over 270,000 acres were devoted to industrial plants. The present-day cultivated area is nearly twice that of Tsarist times.

Livestock breeding, for which these provinces were always famous,

has made corresponding progress. There are excellent pasture-lands, with their thick, juicy grasses, on the mountain-sides, and in 1941 the Republic possessed some 3 million sheep, goats, cattle and horses. Regarding the last mentioned, they were famed for their endurance, but were of small stature. This has been rectified in recent years by crossing Kirghiz horses with Don, Arab and other breeds. Also the prevalent coarse-wool sheep are being more and more replaced by varieties with fine-wool fleeces.

An experimental farm of the Livestock Breeding Scientific Research Institute situated on the Alai Mountains at a height of 9,260 feet has succeeded in raising a new breed of fine-woolled mountain sheep. This breed thrives on mountain heights, and is said to be as good as the best valley breeds of fine-fleeced sheep. Another new breed raised on this farm is a coarse-woolled sheep which is very useful for meat and fat. The farm also breeds yaks; these can take the place of cows and oxen, which cannot live long in high altitudes.

Agriculture in Kirghizia has marched abreast with that of the other Republics of the U.S.S.R.

Substantial progress has also been recorded by the food, meat and dairy, preserving and canning industries. Tens of thousands of tons of foodstuffs are preserved and canned annually. These include meat, vegetable and dairy produce. Although these canning plants were only constructed quite recently, one of the proud boasts of the Frunze meat-plant is that during the war it supplied the Front with over 40 million cans of meat. Sugar refineries were also established recently. In 1947 the output of sugar was double that in 1946. The workers of the refineries proudly boasted that in 1947 labour productivity exceeded that in 1946 by 40·7 per cent, and that, as a result of a reduction in the cost of production, they had saved the State over 7,500,000 roubles.

Early in 1950 a champagne works with a capacity of 250,000 litres monthly was being erected on the outskirts of Frunze—the grapes will be supplied by two Kirghiz vine-cultivation Sovkhozy and Kolkhozy in the Frunze district.

As already mentioned, the mineral wealth of the Republic lay unheeded beneath its soil prior to the November Revolution, but soon after the establishment of the Soviet Power geological surveys were begun. The expeditions discovered 1,200 localities in which rare and non-ferrous metals, coal, oil, building materials and other minerals exist.

Kirghizia's most highly developed branch of industry is coal, which it supplies to the whole of Central Asia. The output of coal in 1932 was 720,000 tons, in 1937, 896,000 tons, and in 1940, 1,383,000 tons. The ore-mining industry has also been extensively developed. The Republic has also rich deposits of lead, tin, gold, mercury, tungsten, arsenic, molybdenum and oil, all of which are now being substantially developed. In Frunze alone a big tool factory—the "Kransky Metallist"—a metal-repairing works, a flour and cereal mill, clothing, knit-wear goods and footwear factories and tanneries have been constructed since the coming of the Soviet Power.

In addition, the Republic possesses a large number of sugar refineries, cotton and wool-cleansing works, a tobacco factory, sawmills, textile factories, as well as metal and oil enterprises and factories producing agricultural machinery.

In his speech at the Soviet of Nationalities, January 29, 1948, the President of the Supreme Soviet of Kirghizia, M. Tokobayev, justly declared that "Kirghizia, a former backward Tsarist colony, has become a flourishing Soviet Republic with all branches of the national economy developing simultaneously".

Who has trained the technicians and mechanics? The answer is the Russian people. They gave of their help freely and in abundance. Then the newly skilled Kirghizians taught their untrained compatriots. This amazing progress is a romance of real life. The nomad cattle-breeders of 1917 had become, in 1947, and even earlier, excellent turners, fitters, engine-drivers, type-setters, machine-operators, technicians and engineers. To put it in a nutshell, these territories, which prior to 1917 had to import pins and needles, now manufacture their own agricultural and other complex machinery.

During the war years coal and ore mines and thirty big industrial plants were constructed. And since the conclusion of the war numerous new enterprises have been opened, including the Belovodsky sugar refinery in 1947.

In all, Kirghizia in 1947 had over 5,000 industrial enterprises, and the sum total of her industrial output was over 160 times that of 1917. In 1914 there were only 1,000 workers employed in industry; by 1940 this figure had risen to 115,000. Prior to the November (1917) Revolution, despite their enormous water-power resources, these Tsarist Provinces did not know what electricity was; they did not possess a single electricity undertaking. In 1947 the Republic had over 135 hydro-electric power-stations of various dimensions which

had been built on its own extensive waterways, as well as on the banks of small but swift-flowing mountain rivers. The aim is now being realised of providing every collective farm with its own small power-station, which will bring added comfort and much greater brightness to every peasant hut, as well as to the schools, clubs, cinemas and laboratories which have been constructed in the villages of the collective farms.

The Republic has many good motor roads, whose total length in 1939 was over 2,200 kilometres. In 1940 many hundreds of kilometres of motor roads were being built in the Tien-Shan Mountains and in the south of the Republic, and the process is still continuing.

A wide main road some 400 kilometres long now runs from Frunze to the centre of the Tien-Shan region of the Republic. The construction of good roads has made possible motor, goods and passenger transport to all parts of the Republic, including remote villages.

When in 1924 a camel caravan brought motor-car parts to Ketmen-Tiube, in the Toktogul district, the people were amazed. Within a week the parts were put together and the car started running. Old inhabitants of that part declare that when they saw " this cart " moving of itself, with no horse or other draft animal, they just could not believe their eyes, and the inhabitants of the villages from miles around flocked to see the wonder. Now, however, motor traffic can be seen in practically every part of the Republic—even in the far-off mountain areas. The number of cars and motor-buses in the Republic in 1947 was ten times that in 1939. Big motor-repair works have been constructed.

Railway construction in this Republic has presented special engineering difficulties because of the nature of the country. In fact, railways run only in the valleys. One of the biggest feats was the building of a railway from Kant to Rybachi on Lake Issyk-Kul. The following extract from a report by B. Krinitsky gives some idea of the difficulties which have been overcome, as well as the importance of the railway from the point of view of the economic development of Kirghizia:

" Jumping down from the coach, I walked over to a moonlit flat stretch of terrain on the track side. A short distance up the line was the village of Krasny Most (Red Bridge), now elevated to the status of a railway station. This was as far as the railway under construction had gotten on its way from the central districts of Kirghizia to Lake Issyk-Kul (which is Kirghiz for warm waters), located at an elevation of 1,800 metres above sea level.

" The most difficult section of the new road begins at Krasny Most, and here the hustle and bustle of construction in full swing did create the illusion that you were witnessing a front-line scene. This was due not only to explosions, but also to the strings of trucks that laboured up front where men were storming the next to impregnable Boom Gorge, carving their way through with the aid of high explosives, real air bombs included.

" Had there been no Boom Gorge here the Kant-Rybachi railway would probably have been built many years ago, for the natural wealth of the Tien-Shans beyond Issyk-Kul has long been crying for an outlet. Here you have gold, coal, lead, sulphur, arsenic, tungsten and salt deposits, and the hides and wool of the cattle and sheep country up in the hills. All this can be shipped easily enough by water to Rybachi, which is a lake port on Issyk-Kul, but the outlet from there has been barred by a roadless strip of rugged mountain country nearly 200 km. wide.

" Already before the Revolution the Tsarist Government sent a commission of geologists and engineers to these parts to find out whether a railway could be laid across the mountains. Nevertheless the hopes of St. Petersburg entertained in regard to the natural wealth of the Tien-Shan area were fated never to be realised, for the commission found the construction of a railway through Boom Gorge ' technically unthinkable '. For a long time after that Kirghizia, which was part of the section of the Russian Empire known as Turkestan, was destined to go without railways; even its capital Pishpek (now Frunze) was linked to the Central Asian rail network only after the establishment of the Soviet system.

" So I stepped out of the railway coach to gaze at the notorious Boom Gorge and watch Soviet railway builders accomplish what was ' technically unthinkable ' for the engineers of old Russia. And even now it seems next to impossible in spite of the fact that you can already see the track creeping forward along the narrow ledge hewn into the sheer mountainside."

" Technically unthinkable "—the Tsarist officials would have also said that it was " psychologically unthinkable " to persuade peasants to interest themselves seriously in such a project, yet the Soviet Power has achieved also this unthinkable thing.

The correspondent continued:

" At night the right of way presents an impressive spectacle. The

railway runs in the gorge of the Chu River, and the banks of the stream are studded with innumerable camp-fires, the glow of which brings out the fantastic shapes of cliffs bathed in the colours of molten copper. Around the camp-fires are the encampments of the builders, many of whom I found to be collective farmers who had responded to the government's call for volunteer workers to help finish the road as quickly as possible.

"If I had thought that a railway construction job whose relation to agriculture was far more remote than, say, that of an irrigation project, would hardly be an attraction to farmers, I was put right on this score during my first visit to these encampments. There were a great many peasants there, and they were taking an active part in discussing the work done in the course of the day. One of them was enthusiastically explaining how he and his crew, all peasants, had learned to reinforce the railway embankment in spots where the swift current of the Chu swept against it and was likely to undermine it unless the ground was properly protected. Another was describing how they had handled a complicated blasting job under the guidance of a 17-year-old Kirghiz blasting expert. A third boasted that he and his fellows had fulfilled their plan in excavation work by 200 per cent.

"In the tone of each it was easy to detect a feeling of profound satisfaction of the kind one might expect of a man who has just completed building a new home for himself. This went to explain why instead of the 5,000 collective farmers called for, 6,248 volunteered. The peasants knew well enough that the Kant-Rybachi railway was a road into their own and their Republic's future. And now they are looking forward eagerly to the day toward the end of the year when the trains will begin running through to the shores of Issyk-Kul."

There are districts high up in the mountains which are inaccessible by foot or horseback for about nine months of the year, and the only means of reaching these is by aeroplane. There are in some cases no proper landing-places, but nevertheless a daily air ambulance and medical service works the whole year round, taking doctors, medical supplies, etc., free of charge to the inhabitants of these areas.

We shall now consider the question of education. At the time of the November (1917) Revolution, as already mentioned, the Kirghizians did not have a written language. The Tsarist Provinces were 98 per cent illiterate. Only some 7,000 children attended 118 schools.

With the aid of the Soviet Power, this gifted people worked out a written language. They proved to be capable and industrious pupils. The progress registered in a generation has no parallel outside the U.S.S.R. Literacy swept over the Republic like a powerful flood-tide driven on by strong winds. By 1929 the number of children attending school was 146,000, and by 1937, 265,000. By 1939 the population was 70 per cent literate.

The Republic had in 1949 nearly 1,500 elementary and secondary schools, attended by about 230,000 pupils. In addition, there are six higher educational institutions, thirty-four technical and teachers' training-colleges, as well as music and art schools. In all there are some 10,000 teachers. Tuition in their native languages is given to the Uzbeks, Tadzhiks and Tatars resident in the Republic.

In 1950 there were over sixty boarding-schools for the children of shepherds in livestock-breeding farms who work for long intervals on distant pastures.

In September 1940 a new alphabet based on Russian was introduced, and in 1943 a Kirghizian branch of the Academy of Sciences of the U.S.S.R. was opened. In addition to the schools and colleges, scores of public libraries and hundreds of People's Palaces and reading-rooms have been established throughout the Republic, even in the smallest villages, which seem to cling so precariously to the steep, wild and lonely mountain-sides.

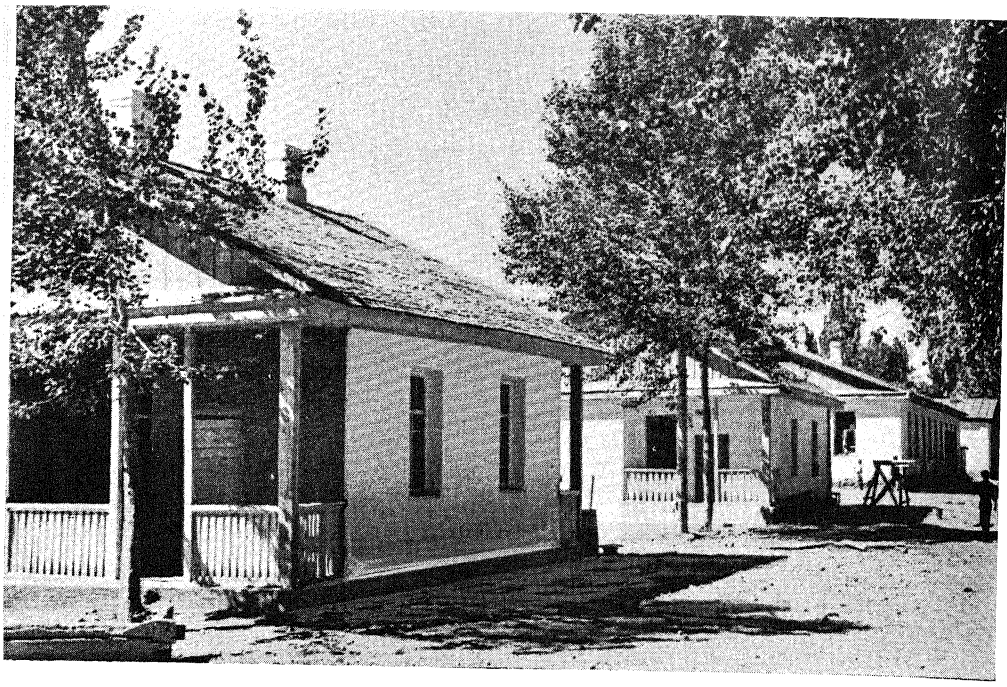
Within a generation a modern Soviet literature has developed which is helped by numerous Kirghiz newspapers and magazines; in addition, in 1936, thirty-six newspapers and many magazines were published in the Uzbek, Tadzhik and Tatar languages.

Prior to the establishment of the Soviet Power the women of these Provinces lived in the usual semi-slave (if " semi " is not too weak a word) existence of woman in Mahommedan countries. Today they are the equals of men in all spheres of private and public life. Meeting those happy, intelligent and well-set-up young women in their twenties, it is difficult to imagine that they are the daughters of women condemned to " purdah ". We often asked ourselves, " Were their mothers segregated and compelled to wear the stifling veil less than a generation ago? " It seemed incredible, but it was a sober fact.

" Culture " (a word which Soviet citizens use much more than the less comprehensive word " education ") is many-sided, and here we wish to quote some Soviet reports of the progress made in this sphere.

First, to take the question of Opera. A. Jakishev, Head of the Art

Breakfast served on the terrace at a Children's Sanatorium in Kirghizia.



Modern-looking villages are being built. These cottages belong to personnel of State Stud Farm No. 54 in Kirghizia.

Kirghiz horsewomen participate in a collective farm festival.

Administration of the Council of Ministers of the Republic, in an article dated May 1947, stated:

"A gala event for the Kirghiz public was the recent celebration marking the 20th anniversary of the founding of the Kirghiz State Theatre of Opera and Ballet.

"The founding of this theatre 20 years ago was the equivalent to the birth of Kirghizia's theatrical art as a whole, for the appearance of the Republic's first professional theatre served as the signal for the rapid development of national drama and national music along the lines of Russian and Western European music. But the fundamental condition which made possible this development was the Soviet revolution.

"The finest young Kirghizians, the flower of our youthful intellectuals, got together, formed a studio and enthusiastically tackled the job of building a national Kirghiz theatre. They had to compose their own songs and paint their own stage sets. The actors studied indefatigably, gained experience and perfected their skill. In 1930 the studio was transformed into a dramatic theatre and joined by the outstanding masters of folk art. This ushered in a new stage in the development of Kirghiz art. The Republic's government encouraged the pioneers, rendered them every material aid and attentively followed their progress, helping them overcome their difficulties and mistakes and forge ahead.

"The theatre's efforts were rewarded with the staging of its first musical drama, 'Adzhai Ordusha', meaning 'Not Death but Life'. It told the story of the struggle waged by the Kirghiz people for their independence. In form it was close to opera, containing as it did arias and ensembles, while the orchestra was a symphonic orchestra in embryo.

"'Adzhai Ordusha' may be considered the first step in the transformation of the Kirghizian drama theatre to opera. Soon after a chorus, a ballet troupe and a real symphonic orchestra were organised. Systematic vocal training of solo singers was begun. In Moscow a Kirghiz studio was established to prepare performers, and in Leningrad a Kirghiz department was formed at a dancing school. An all-Republic amateur art review, organised in 1936, brought to light a number of new distinguished stage performers. Among them was Saira Kitzbayeva, now People's Artist of the Republic, an extremely gifted singer with rare stage charm. Two well-known Russian composers

left Moscow for Kirghizia and there, together with the Kirghiz composer Abdylas Maldybayev, laid the groundwork of Kirghiz opera music.

" Soon after the theatre presented the musical drama ' Altyn-Kyz ', or ' Golden Maiden ', followed by the Republic's first national opera, ' Ai-Churek ' (Moon Beauty).

" In 1939 a review of Kirghiz art was held in Moscow. It was in the nature of a triumph, and the Union government decorated over 70 members of the troupe. These awards inspired the theatre's personnel to further creative effort.

" Outstanding achievements of the theatre were ' Eugene Onegin ' and ' Madame Butterfly '. A number of operas on contemporary, historical and revolutionary themes were presented. These productions considerably widened the theatre's horizon and did much to heighten the skill of the troupe.

" The theatre also scored considerable success in the ballet. In spite of the novelty of this form of art the ballet troupe managed in a short time to put on a series of excellent performances, including Delibes' ' Coppelia ' and Krein's ' Laurentia '. Two ballets on national themes were written and produced. The recent staging of Glazunov's ' Raimonda ' clearly attests to the great artistic strides made by the ballet troupe."

Jakishev concluded: " The theatre's 20th anniversary was marked by the presentation of the opera ' Manas ', based on the Kirghiz epic of the same name. The performance was well received. At present the theatre is hard at work to produce finer performances devoted to modern themes. With the fruitful experience of 20 years of successful creative effort behind it, the theatre confidently looks forward to scoring further successes in the future."

This subject is so important from the viewpoint of demonstrating the astounding cultural progress that this Republic has made in less than a generation that we think it well worth while, in addition, to quote in full an article entitled " A Brief Review of Art in Soviet Kirghizia " by V. Gorodinsky. He wrote:

" ' Manas ', the grand epic of the Kirghiz people, consisting of over 400,000 lines of verse, is longer than the Indian ' Makhabkharata ', the Greek ' Iliad ' and ' Odyssey ' put together. The entire contents of this great poem have been preserved in the memories of the people's bards, who have handed it down by word of mouth for the simple

reason that there was no written language in Kirghizia until the Revolution. And for this simple reason Kirghizia had no theatre and no written music, notwithstanding the fact that the country possesses an inexhaustible fund of musical folklore.

" This too accounts for the fact that Kirghiz art and that of Kazakhstan are among the most immature.

" It is obvious that a people which has created ' Manas ' must indeed be talented. A Kirghiz legend has it that in olden times a song flew over the earth, and whenever it came closest to the earth, that was where the people sang best. It came closest of all to Kirghizia, and that is why her people are the best singers in the world. This priceless art of the Kirghizians is not without foundation. There are not many peoples as gifted in song and music as the Kirghizians.

" The akyns—minstrels playing on the two-stringed instrument, the komuzchi—and rhapsode-manaschi, reciters of ' Manas '—are the most honoured people in the city and village. Many of them are famed throughout the Republic. Muratali Kureschiev and Karomolda Grozov are celebrated minstrels, and the renowned Manaschi, Moldobasan Musulmashkulov and Saenbai Karalaev, are People's Artists of the Republic known beyond the borders of Kirghizia.

" Soviet Kirghizia is not only continuing its traditional oral art, but is developing its opera and dramatic theatres and its national orchestra. A number of talented Kirghiz composers, conductors, artists, actors and actresses have come to the fore in recent years. Actresses occupy a special place of honour in the Republic as there was not a single woman who was able to read and write in pre-revolutionary Kirghizia.

" Kirghizians are passionately fond of the theatre. They travel hundreds of kilometres on horse and camel, and whole settlements come down the mountain-side to see a performance at the State Kirghiz Theatre in Frunze. Kirghiz collective farms often buy tickets for a whole performance for their members, and the theatre is packed to capacity.

" At one of the first performances of the Kirghiz musical drama ' Adzhai Ordusha ' (Not Death but Life), a curious incident happened that vividly portrays how extremely impressive and expressive are the Kirghiz people.

" The play depicted a poor peasant father who, during the famine, was about to sell his daughter, Zulaika, to a rich foreigner. The heartbroken girl cried bitterly, beseeching her father not to sell her,

and the whole audience were with her. As the play progressed the stern mountain shepherds and the young horsemen, their narrow black eyes filled with fiery hate, gripped their whips, a weapon inseparable from a Kirghiz traveller. Then suddenly amidst the general excitement in the theatre, an old collective farmer jumped up and shouted: 'Hey you, father, don't sell her, I say. If you do, you are a beast, not a father.' The long and short of it was that the aroused audience almost throttled both the seller and the buyer. This we may attribute not only to the fact that it was not a theatre-going audience, but to the performance of the role of Zulaika, which was played for the first time by a young actress who subsequently captivated exacting Moscow audiences during a festival of Kirghiz art with her brilliant acting. Anvar Kuttabayeva is now one of the most popular Soviet actresses and has been awarded the title of People's Artist of the Kirghiz Republic.

"Anvar's biography is as interesting as it is simple. Left an orphan, she was brought up by a stepmother who made her childhood miserable. Anvar was a real Cinderella in her father's wealthy household. Her stepmother and her daughters mercilessly gibed the little girl and forced her to do the hardest chores. At the age of nine, Anvar chanced to visit a theatre, and from then on her one dream in life was to get on the stage. Finally, the girl ran away from home and got employment in a theatre. Now she is a star not only in National Kirghizian plays but gives splendid renditions of difficult roles in plays by the Russian dramatist Ostrovsky. Particularly fascinating is her interpretation of Nastya in Ostrovsky's 'There was not a Farthing when suddenly a Guinea appeared.'

"Even more romantic is the biography of Kanymkul Aibasheva, People's Artist of the Kirghiz S.S.R. The daughter of a poor peasant, she was raised in some remote spot where, in accordance with the village custom, she was sold to a rich merchant for 20 sheep and a limping horse. Kanymkul ran away from her beastly husband seven times and each time horsemen caught the recalcitrant girl and returned her to her lord and master, who 'taught' his wife with the whip until she almost died.

"One day Kanymkul's husband hired a new worker, a young horseman from the south of Kirghizia. Tall and graceful as a willow, the young man captivated the mistress's heart and himself fell in love with her. On a dark, moonless night, they fled the house and for a whole year roamed through mountain villages hiding from Kenebai's horse-

men. Finally they came to a town where they learned that Soviet law prohibits anyone from pursuing a woman who had abandoned her hated husband, and that she had the right to live her life as she wished.

" Kanymkul came to the theatre quite by chance. Her husband worked in a newspaper printing plant where he happened to see an advertisement that a theatrical school would accept as students Kirghiz girls with good voices. And what Kirghiz girl hasn't a good voice! At the audition Kanymkul sang her favourite song ' Senekbai ' and was accepted. She had a beautiful fresh voice and an excellent ear. Later she appeared in the play ' Shaboshalluzhda ', playing the role of a young wife of an obnoxious, mean old man. The heroine runs away from her husband, is beaten and mocked—in a word, it was a stage reproduction of Kanymkul Aibasheva's former life. Her interpretation of the role created a furore. Since then Kanymkul has played hundreds of the most varied roles. Her ability to impersonate is extraordinary. The timid, cowed merchant's wife in ' Shaboshalluzhda ' and the bandit woman Kallyk in the opera ' Michurek ', the young Chinese girl in ' Adzhai Ordusha ' and even an officer's wife in Gogol's famous play ' The Inspector General ' are some of the diverse characters rendered by Kanymkul Aibasheva.

" Another fine actress is Saira Kiizbayeva, who sings exquisitely the role of Madame Butterfly, the Kierchen song in Beethoven's opera ' Egmont ' and Chishar in ' Altyn-Kyz '. Another splendid singer is Byubyusars Beiseshbayeva, who was the first woman virtuoso on the national instrument komuzchi.

" The best-known Kirghiz composer is Abdylas Maldubayev. He has written many songs now popular throughout Kirghizia. He is also co-author of the operas ' Altyn-Kyz ', ' Aichurek' and ' Azhal Ordusha '. Abdylas Maldubayev has been awarded the highest Soviet title in the arts—People's Artist of the U.S.S.R.

" It is worth noting that the Kirghiz Opera House is making use of folk-tales in its work—including such epics as ' Kurmambek ' and ' Manas '. The operas ' Altyn-Kyz ' and ' Aichurek ' are partially based on subjects taken from the cycle ' Semetai ' of the Manas epic.

" This short account covers only a small part of the work now being done in the fields of theatrical and musical art in Kirghizia."

That is more than a review of progress in art; it is also a review of the general development of the Kirghizian people under the Soviet Power.

The cinema—the most popular of all modern arts—has also not been neglected in Kirghizia. At the end of 1947, fifty new cinemas were opened in the rural areas of Kirghizia, particularly in the out-of-the-way villages in the mountains of Tien-Shan and Pamir-Altai. Thirty sound travelling cinemas have also been organised. During harvesting the best educational and entertainment films are shown in the Kolkhozy. Often the showing of these films is accompanied by lectures given by qualified scientists.

Kirghizia owes much, very much, to the Health Services introduced since 1917. Prior to the establishment of the Soviet Power, the Kirghizians were slowly dying out as a result of tuberculosis, typhus, malaria, syphilis and trachoma, coupled with a poor health and medical service. Hygiene was non-existent, and there were only fifteen doctors and surgeons' assistants in this vast territory. In the decade preceding 1914 the population declined by 10 per cent. Today there are clinics with modern equipment even in the most remote corners of the Republic, and when necessary doctors travel out to the fields to attend to patients. Numerous health resorts and sanatoria have been established throughout Kirghizia. The Republic has a splendid mountain climate, curative springs and a great deal of sunshine. During the twelve years preceding the 1939 census the population increased by no less than 45 per cent. What an achievement compared with the decade 1904–14, when the population declined by 10 per cent. Thanks to a combination of climate and health services, the Republic is well on the way to becoming a health centre for Central Asia.

To refer now briefly to Frunze, the capital of the Republic. As our plane circled over the city prior to landing, we could scarcely believe our eyes. The streets were perfectly straight, and lined with tall, well-trimmed trees which had been planted in equally straight rows, and which looked like giant guardsmen standing to attention. The city as a whole presented a most fairyland-like appearance. We were enraptured, and remarked to a fellow-traveller: "This seems unreal; we have never seen such straight streets." He remarked with a friendly smile: "As a capital it is young and was planned." A nearer acquaintance does not dispel the first impressions of delight.

Frunze, so called in honour of the great Soviet military leader, Michael Frunze, who was born there, nestles in the midst of the rich and fertile Chu valley, at the foot of the Kirghiz Alatau, with its marvellous panorama of mountain summits eternally capped with snow. It is criss-crossed by mountain streams, which make Frunze a

garden city. Its geometrically straight streets are lined by towering oak, poplar, elm, maple and birch-trees. Especially charming is the main avenue, Dzerzhinsky Street. Rows of trees that stretch out in even trim files, and endless lawns and flower-beds, lend the street, like many another part of the city, the appearance of a shady nook in an enormous garden.

The city, formerly called Pishpek, was founded in 1878, on the site of what was once a fortress of the Kokand Khanate; this fortress was destroyed in 1863. In 1913 Pishpek was a little wretched town with a population of 18,000, situated hundreds of kilometres from the nearest railway line. The industrial activity of the city was negligible, its only *raison d'être* being a tremendous Eastern bazaar. The town was a conglomeration of little mud huts, roofed with cane-rushes. It had practically no schools.

In 1928 Pishpek, renamed Frunze, became the capital of the Kirghiz Soviet Republic. The town was connected by rail to the Turkestan–Siberian line. Since the establishment of Soviet rule the city's population has increased more than five-fold, and by 1939 Frunze already had 93,000 inhabitants. Its external appearance also changed. A large number of well-built stone structures and public buildings were erected, streets were asphalted, water-mains were laid and electricity was introduced.

Frunze has become an important industrial centre for the processing of agricultural raw materials grown in the Chu valley and other districts of the Republic. Its new factories and plants turn out canned meats and other meat products, flour, wines, tobacco and cigarettes, woven and knitted goods, fabrics, leather, footwear. A large hemp and jute industry has been established for the making of rope and fabrics from bast crops now grown in the Chu valley. The collective farmers of the Chu valley, aided by the Union Government, built the Great Chu Canal 270 kilometres long. On the banks of the canal, where it runs near Frunze, hydro-electric power-stations have been erected. One of them, the Voroshilov Station, supplies power to the industries of the city, and lights up the houses and streets. A railway line is being constructed from Frunze to Lake Issyk-Kul.

Frunze has also become the cultural centre of Soviet Kirghizia. It has four higher educational establishments. Its numerous scientific research institutions, such as a history, literature and language institute, biological and geological institutes, an institute of epidemiology and microbiology, and a livestock institute, as well as the veterinary,

agricultural, fruit, vegetable and tobacco experimental stations, investigate problems connected with the development of the natural resources, economy and culture of Kirghizia. Most of the scientific institutions of Frunze, and of all the Republic, are united under the jurisdiction of the Kirghiz branch of the Academy of Sciences of the U.S.S.R. The capital has a regional museum and a picture-gallery. There is also a State orchestra of folk instruments.

Frunze's swift and intense growth in population and rapid economic and cultural development bear witness to the genuine regeneration of the Kirghiz people, and the prosperity and flourishing of the entire Kirghiz Soviet Socialist Republic.

In 1948 the Committee for Architecture of the U.S.S.R. approved a plan for the reconstruction of Frunze and a number of other towns of the Republic. Industrial enterprises, four higher educational institutions, theatres, hospitals, a new opera-house, museum of national culture, public library, a children's palace, hotel, several clubs and cinemas are to be built in Frunze by 1950.

Kirghizia is playing her full part in the post-war (1946–50) Five-Year Plan.

Capital investments amount to about 1,200 million roubles, including 337 million roubles for works under the Republic's jurisdiction.

Among the new enterprises to be built and set into operation during the five-year period are: electric power-stations with a capacity of 38,000 kilowatts, coal-mines with an output capacity of 825,000 tons per annum, a cotton-ginning mill, with a capacity of 10,000 tons of fibre, a sacking-plant, a spinning-mill, a cement works with a capacity of 30,000 tons, and a meat-packing plant. The construction of the Kant-Rybachi railway is to be completed.

Among the industries under the Republic's jurisdiction a hydro-electric station with a total capacity of 12,000 kilowatts, and coal-mines with a capacity of 125,000 tons, will be put into operation.

The industrial output of enterprises under the Republic's jurisdiction in 1950 was fixed at a value of 360 million roubles, of which the output of State industries under local jurisdiction and of industrial co-operatives would comprise 75 million roubles.

New coal-sites with a total capacity of 5,500,000 tons are to be prepared for exploitation, and industrial resources of lead, mercury, antimony, natural sulphur and gypsum are to be located.

Some of the principal items of output in 1950 were scheduled as follows:

Coal (tons)	1,600,000	Woollen fabrics (metres)	500,000
Petroleum (tons)	80,000	Hosiery (pairs)	3,550,000
Electric power (kwh.)	180,000,000	Footwear (pairs)	920,000
Cotton fabrics (metres)	690,000	Sugar (tons)	75,000
Silk fabrics (metres)	920,000	Meat (tons)	17,000

The area under crops in 1950 is estimated to reach 1,102,000 hectares, of which 949,000 hectares will be on collective farms; the area sown to grain crops is estimated at 704,000 hectares, of which 620,000 hectares will be on collective farms; the area sown to industrial crops is scheduled at 108,000 hectares, of which 99,000 will be on collective farms; the area planted to melons, potatoes and other vegetables is estimated at 36,000 hectares, of which 20,000 hectares will be on collective farms; the area sown to fodder crops is scheduled at 254,000 hectares, of which 210,000 will be on collective farms; the area sown to cotton is estimated at 53,000 hectares. The area planted to high-grade tobacco is to be enlarged.

Livestock by the end of 1950 is scheduled to reach: horses 490,000, including 430,000 on collective farms; cattle 560,000 head, including 260,000 on collective farms; sheep and goats 4,300,000, including 3,300,000 on collective farms; and pigs 60,000, including 20,000 on collective farms.

The reconstruction of the Krasnorechye irrigation system is to be completed and work undertaken to irrigate the Otuz-Alyr lands. Construction work on the Orto-Tokoi reservoir and Great Chu Canal is to be expanded. The irrigated area is to be increased by 22,000 hectares in the period 1946–50.

The plan of State-owned housing accommodation in the towns of the Kirghiz S.S.R. to be made available for occupation in the period of 1946–50 is fixed at 215,000 square metres. The construction of a waterworks, sewer system and a trolley-bus line will be completed in the city of Frunze.

By 1950 the number of schools is estimated at 1,585, with an attendance of 278,000, and the number of hospital beds is to reach 7,200.

An ambitious plan! Yes, but a plan well within the capacity of the Kirghizian people.

Kirghizia contributed her full quota to winning the second World War. Many of her bravest sons fought on the Western Front, helped to drive the invaders from Soviet soil and crush them in

Central Europe. Twenty-eight of her best fighting men, " the Pamlov heroes ", fell in battle on the approaches to Moscow in the winter of 1942 under their courageous and talented leader General Panfilov, and their names have been inscribed in the Soviet Roll of Honour. The monument erected to the memory of brave General Panfilov in Frunze is far more than a mere monument to a distinguished soldier; it symbolises more than courage and devotion; it symbolises the indestructible friendship of the Kirghizian and Russian peoples created by the Soviet Power, which has enabled the Kirghizian people to advance several centuries in less than three decades.

CHAPTER IX

TADZHIK SOVIET SOCIALIST REPUBLIC (TADZHIKISTAN)

"SUNNY TADZHIKISTAN" is the most southern Republic of the U.S.S.R. It includes within its jurisdiction the autonomous region of Gorno-Badakhshan. The Republic is situated north of the Amu-Darya (Oxus)[1] River between 39·40° and 36·40° north latitude and 67·20° and 75° east longitude—i.e. it is in the same latitude as southern Spain, southern Italy and Greece.

On the west and north it is bordered by Kirghizia and Uzbekistan, on the east by Chinese Turkestan and on the south by Afghanistan. Thus the Republic lies on the frontier between the U.S.S.R., Afghanistan and western China at the junction between the Tien-Shan Range (the "Celestial Mountains") and the Pamirs, the "Roof of the World". The Stalin Peak, about 24,600 feet, and the Lenin Peak, about 23,400 feet, are situated in the Tien-Shan Mountains.

Some idea of the height of this range may be gauged from the fact that the lowest valleys are fully 3,000 metres (over 9,800 feet) above sea-level.

The Fedchenko Glacier, one of the most extensive in the world, is also situated in the Tien-Shan range. This glacier, which is 48 miles long, and which, together with adjoining glaciers, extends in all to a length of 68 miles, is today bringing greater blessings than ever in the past to the native peoples.

The Fedchenko and the other glaciers are not only the source of many turbulent rivers which flow from east to west along the southern frontiers of the Republic, they also supply the motive power of many hydro-electric stations which have been erected since 1917, and they are equally the sources of many modern irrigation schemes which have done so much to enrich the Republic in recent years.

The country is a real mosaic of varying and contrasting conditions. Seen from an aeroplane it looks as though it had been laid out by

[1] This is a very long river. It flows from Lake Victoria to the Aral Sea. In its upper reaches it is called the Pandj, and in its lower reaches the Amu-Darya (Oxus). In western Europe it is best known as the Oxus.

some mighty superhuman planner in vast terraces rising from the deep valleys, in terrace after terrace along the slopes of the towering mountains crowned with huge glaciers.

In the deep valleys there is much semi-desert steppe, which is being slowly reclaimed, and big areas of irrigated land covered with flourishing orchards. Thickly planted cotton plantations and smiling vineyards extend right up to, in fact merge with, the foothills of the lofty mountains. These mountains from the foothills upwards to the peaks are far from being all bleak, bare and unproductive. True, some of the mountain-sides are bare, but others in the lower zones are covered with pistachio, almond, hazel, and in the middle zones with deciduous trees and extensive nutritious pasture-lands. Also the high table-lands vary: parts are semi-desert and covered with wormwood, but others consist of extensive and rich meadows.

From the deep valleys, with their beautiful orchards and irrigated lands, to the high table-lands, with their wormwood and meadows, one culture seems to merge with the next, until finally the cold, white regions of perpetual snow are reached, topped by peaks over 23,000 feet high.

Unlike the majority of the peoples of Soviet Central Asia, the inhabitants are not of Tiurk, but Iranian origin. They speak a dialect differing little from Persian, and many scholars maintain that the natives are the descendants of the original Aryan population of Turkestan.

The Tadzhik people through the centuries have fought long and stubbornly for their freedom, and they have known the "jackboot" of many conquerors. They were subjugated by Alexander the Great, by the Scythians, Ephthalites (White Huns), Arabs, Turks, Tartar Mongols under Genghiz Khan and other conquerors. At the time of the November (1917) Revolution they were under the cruel rule of the Khan of Bukhara. That autocrat and his tax-collectors treated the Tadzhiks even more brutally than his other subjects because they were not Moslems.

Mr. A. Polovtsoff, the Tsarist official, who was sent to the country in connection with frontier delimitations and other questions prior to the first World War, wrote:

> "They (the Tadzhiks) instinctively feel that they are of the same blood as Europeans. Bukhara to them is abomination, an inferior, debased class of humanity; they call Bukharans 'Mang-

hit', a word of the same origin as our 'Mongol', which to them implies every possible vice. On the other hand, the Bukharans know that the Tadzhiks are not Moslems, and therefore they hate them; they are poor, therefore they despise them and think them totally uninteresting; they live secluded in far-away valleys among high and forbidding mountains, the very sight of which makes a Bukharan heart faint. From whatever standpoint Bukhara considers them, they are horrible people.

"Such a mutual misunderstanding was confirmed by total ignorance of each other. No Bukharan ever appeared beyond the fortress of Kala-i-Wamar, the residence of the Beg of Shughnan, so that whole valleys had never seen a Bukharan at all; as for the few natives who ever came down to the plains, they all went to Russian Turkestan—none ever ventured to Bukhara.

"The international delimitation had fixed the taxes (in kind) which these countries were to pay to Bukhara, but had delayed the first instalment for a number of years during which, except for the presence of a Beg with a small retinue down in Shughnan, the allegiance to Bukhara had never assumed any tangible form. So when tax-gatherers suddenly appeared and began treating the people as conquered slaves, friction arose, and it was to allay this friction that I went there." [1]

Culturally these provinces were among the most backward in Tsarist Russia. In 1917 only 0·5 per cent of the population could read and write, and the women were compelled to wear the "paranja" (veil) and to live in seclusion.

At the time of the March (1917) Revolution the bulk of the people were engaged in stock-breeding. The wooden wheel in irrigation and the wooden plough on the fields were the instruments then in use.

The Khans and the Beys exploited the peasants to the full; not only was the best arable and pasture land the private property of the Khan and the local feudal chiefs, but also practically the entire irrigation system belonged to them.

How did they use these advantages? We must remember, as just mentioned, that the most primitive methods in stock-breeding and agriculture were in vogue, yet the Khan and the Beys in taxes, land-rent and water charges took 80 per cent of what the peasants raised. The peasants existed on the level of badly-fed beasts.

[1] *The Land of Timur.*

Just before 1914 some local merchants began to exploit the coal and oil resources of the province. However, little progress was made. In 1917 the total output did not exceed a few thousand tons, and it is not therefore an exaggeration to say that at that time industry was practically non-existent.

It is not out of place here to recall the fact that, although little is known in Great Britain about this Republic, the delimitation of the frontier of this area with Afghanistan in the Pamirs created some dangerous friction between the Tsarist and British Governments in the beginning of the present century. Although nominally the two States involved were Bukhara and Afghanistan, actually it was Tsarist Russia and Great Britain which conducted the negotiations and made the decisions.

The Tsarist official, from whom we have already quoted, reported on this subject. Explaining where the Pamirs are situated he wrote:

> "A 'pamir' really means a high rocky tableland. In Asia there are several large pamirs grouped together, some of them in China, the others making up a vast region stretching from Ferghana down to the upper course of the Oxus, which forms the north-eastern frontier of Afghanistan." [1]

Explaining the aim and make-believe outcome of the negotiations, he stated:

> "In the latter part of the nineteenth century an international boundary commission granted this region to the Khanate of Bukhara and reserved a narrow strip of territory on its southern side for Afghanistan, thus creating a double buffer, partly Afghan and partly Bukharan, between Russia and the British Empire of India. The whole arrangement was purely artificial. It was the outcome of that strange reluctance which both British and Russian Government offices displayed at the idea of a common frontier in Asia. And this in its turn was mixed up with an exaggerated respect for formulas and sentences: a 'buffer state' was considered the panacea for all trouble, whereas in point of fact it was the very best way of producing it. As for the River Pandj (such is the name of the upper course of the Oxus in those parts), however broad a ribbon it was made to look on the maps, it was far from being an efficient frontier, and is indeed but a quiet, easily fordable stream."

[1] A. Polovtsoff, *The Land of Timur.*

Here not Bukharan and Afghan soldiers faced one another, but British and Tsarist troops. The author continued:

> "Beyond it rises a mountain range, the slope of which is Afghan, though British military outposts peep over the crest of the chain. On the other hand, the Pamirs are technically part of a province ruled by a Bukharan Beg or governor. Owing to the political importance of the place, however, Russia had, in practice, been allowed to have military outposts along the Bukharan frontier; Bukhara was inside the Russian customs-limit, but the Bukharan soldiery were absolutely inefficient, even in the eyes of the boundary commissions. As a result of this arrangement, there were never any Bukharans of any kind along the frontier, all authority being merged in the hands of the Russian officers."

Map appearances can be very deceptive. The author concluded:

> "So if, on the map, it all looked right, and there were as many as two buffer states between India and Russia, in reality the British and Russian officers were divided merely by a rivulet and a mountain slope which it would have taken a couple of hours to climb and much less to roll down.
>
> "When I went there, Lord Kitchener, who was then in charge of the Indian Army, was inspecting the frontier outposts. I had no idea that we were so close to each other, and we both had a hearty laugh over it a few years later when he told me how he had studied my camp and followed my movements through his field-glasses, being fully convinced that I had come there to spy on him."

As already mentioned, this territory at the time of the Revolution (1917) formed part of the Khanate of Bukhara. In 1924, when the different nationalities within the then Peoples' Soviet Republic of Bukhara decided to constitute their own separate States, Tadzhikistan was established as an autonomous Socialist Soviet Republic within Uzbekistan, and on December 5, 1929, it was raised to the status of a Union Republic and admitted as such into the U.S.S.R. It now comprises the Garm, Kulyab, Leninabad and Stalinabad Regions and the Gorno-Badakhshan Autonomous Region.

Its area is comparatively not extensive by U.S.S.R. standards—i.e.

55,700 square miles: 5,000 square miles larger than England. About 75 per cent of the population are Tadzhiks; the remainder consists of other Central Asian peoples and Russians.

The Central Government in Moscow sent teachers, industrial and agricultural specialists, administrators, doctors and Communist Party members to assist the local people to raise the cultural and productive level of the Republic. Here, as in other similar areas, the policy was to train the most promising and reliable of the local inhabitants to educate and assist their own people.

One of the most urgent tasks was the spread of general education. Accordingly, between 1917 and 1939 many elementary as well as secondary schools and higher educational institutions were established.

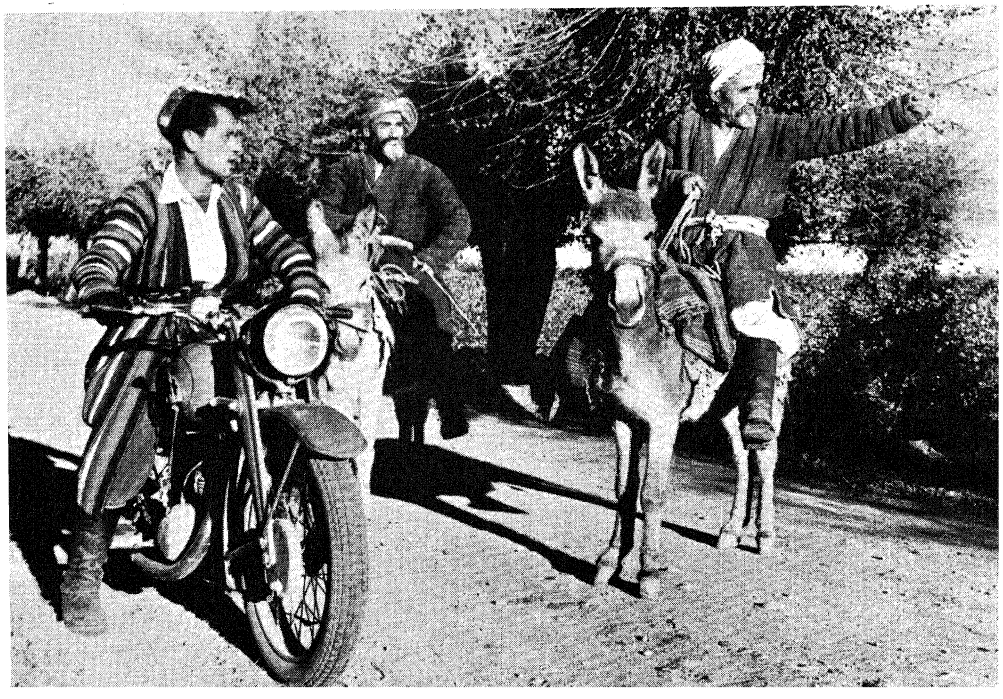
By 1949 there were over 3,000 primary and secondary schools, forty secondary and higher technical institutions and a State Tadzhik university. In addition, hundreds of public libraries and reading-rooms were opened. The elementary schools, public libraries and reading-rooms were set up not only in the towns and villages near the centres of population, but also in the most remote villages on the high table-lands and slopes of the Pamirs. Despite the heritage of illiteracy, the Tadzhiks are now great readers. Millions of books, including home and foreign classics, text-books, works on science, both specialised and popular, etc., are published annually. By 1949 sixty-four newspapers, with a circulation of 270,000, most of them in the Tadzhik, Uzbek and Kirghiz languages, were published. The Press caters fully for the different nationalities. By the same year not only were Tadzhik drama, music and art much developed and appreciated within the Republic, but they were also famous in Moscow and throughout the U.S.S.R. Moreover, a number of scientific institutions were established with the aid of and under the supervision of the Tadzhik branch of the Academy of Sciences of the U.S.S.R.

The result of all this great cultural effort was that already by 1939 no less than 72 per cent of the entire population was literate. That single achievement—quite apart from the many others—would have justified the November (1917) Revolution.

Respecting mineral resources, nothing remotely approaching a complete geological survey had been made under the Khanate—in fact, the work was not even begun until 1926; but in that year the surveying was efficiently taken in hand. In the past it had been assumed that the territory was poor in minerals; the various surveys proved the opposite. The Republic was found to contain valuable

A Tadzhik coal-miner,
Zeya Artykov.

Brigade-Leader Zhurayev, of the "Voroshilov" Farm, Tadzhikistan, makes his rounds on a motor-cycle, while age still prefers the traditional donkey.



The brothers Dodobaev and their wives of the "Stalin" Collective Farm. In 1949 they received for their work-days 31,000 roubles in cash, as well as 3 tons of grain and other products.

A fine herd of goats at the "Bolshevik" Collective Farm in Tadzhikistan.

and extensive deposits of brown-coal, lead, zinc, asbestos, mica, corundum and emery, lapis lazuli, potassium salts, sulphur.

The lead and zinc deposits at Kansai provide the ore for the Chimkent Lead and Zinc Refinery in Kazakhstan. The Takob fluor-spar deposits, which were found to be the largest in the Soviet Union, provide valuable raw material for aluminium smelting. Molybdenum and optical crystals were found in the Pamirs and at Darvaza. Coal deposits have been found in every region of the Republic. The most extensive, at Ravat, are estimated to amount to 1,000 million tons. Twelve oil-fields have been discovered, and there are also extensive peat deposits.

In addition, Tadzhikistan contains deposits of such rare metals as uranium, radium, arsenic, bismuth and gold. Truly the territory is very rich in mineral resources, and only the advent of the Soviet Power was needed to make them available for the use of mankind.

In 1917 all this territory was practically roadless, and only hardy, sure-footed and cool-headed travellers could risk the narrow, precipitate tracks and flimsy " bridges " slung across yawning chasms and mountain gorges, where the slightest giddiness meant certain death.

A. Polovtsoff, from whom we have already quoted, described his experience thus:

" Travelling in the Pamir valleys is giddy work. The path often soars up to incredible heights, following, as a rule, the river edge and clinging to the cliff sometimes thousands of feet above the foaming water. At certain spots the rock is so steep that no path could scale it, and in order to get along, two horrible inventions are used: one is called a cornice and the other a balcony (or ' ovring ' in the vernacular).

" A cornice is a ledge hewn out of the stone where there is no overhanging rock; it is just broad enough for a horse to put its feet on to. One hardly dares to wink, much less to sneeze, for one realises that the least intrusion of an unforeseen element in the question of balance may mean death both swift and sure. A cornice is especially nasty when it rises so as to turn over a protruding cliff; it apparently leads to nowhere, going off straight into the blue of heaven, and only when you are at the turning-point with nothing to hold on to, do you see what still lies ahead of you; the suspense just before the turning is very unpleasant.

" The ovring, however, is worse. Where the cliff is absolutely

like a wall, so that the most attentive eye has failed to detect any anfractuosity to which to cling, men have managed to bore holes (in very slow progression, I fancy) into which they have driven sticks which protrude over the abyss; on those sticks small boards or branches are placed, and the whole contrivance does duty for a road. It is rickety, of course, and swings under the horse's weight; besides, the poor horse, accustomed as it is to carrying bulging loads, is instinctively afraid that whatever is on its back may catch against the wall of stone, with fatal results, so that it always goes along the very edge of the balcony.

" However, these flimsy feats of engineering have been there since time immemorial and have served their purpose for many generations. The native guides try to prevent travellers from dismounting in such dangerous spots, for fear they may become giddy and fall over; but I never dared to entrust the double weight of myself and the horse to those shaky sticks, and always went over them on foot. The experience is not pleasant, though one gets used to it." [1]

The author had to travel over one of the Pamir passes, in this case the Gooshkhon Pass. It certainly required nerves of steel:

> " The ascent is so steep that the horses can carry no loads; I led mine by the bridle, both of us panting hard, but I never managed to take more than four steps without sitting down for a rest. Once this hard climb is accomplished, you reach a platform just large enough for one horse to stand upon, and so narrow that I sat down there with one foot dangling over one country and the other over the neighbouring one. Then begins the descent into the second valley.
>
> " I had been told to wait for the first hour after noon, as one had to cling down a wall by hacking out steps, and it is easier to do that when the sun has softened the ice. As it was, one of the pack-horses tumbled down and was killed, and it looked anything but tempting to follow the poor brute; down below, far away, stood rows of rocky needles which seemed to have been put there on purpose to impale whatever fell from above."

Much has been done under Soviet rule to overcome the difficulties of travelling which nature imposed. By the end of 1933 the Republic had 12,000 kilometres of roads suitable for vehicular traffic, out of which 4,800 kilometres were automobile roads. Some of these motor

[1] *The Land of Timur.*

roads are very lengthy. For instance, the Yausi–Bazar–Charm road is 107 kilometres long, and the Osh–Khorog road 700 kilometres. In 1940 a motor road 557 metres long was completed running from the capital, Stalinabad, on the edge of the Pamirs, to Khorog, the capital of Gorno–Badakhshan Autonomous Region in the Pamirs. This represented a great engineering achievement. Railway development has also been well maintained. A railway line has been built from the old terminus Termez to Stalinabad, the capital, a distance of 200 kilometres—i.e. a railway now extends to the foothills of the Pamirs. The capital is also connected by airlines with Termez and Kagan, and river traffic now is much more developed than in pre-revolution days. The Republic is now covered with a network of roads, and the facilities for transport by rail and river are much better than in the past.

Efficient research into the water-power resources (" white coal " of the Republic) was not begun till 1926, and, as one would imagine, they were found to be enormous. It is estimated that the available water-power totals about 15½ million horse-power. The Varzob hydro-electric station now supplies, among other institutions, current for the growing industries of Stalinabad. There are many small stations supplying villages and collective farms. The total output of the power-stations increased from 1·5 million kilowatt-hours in 1932 to 28·1 million kilowatt-hours in 1937. We shall return to this subject in later pages of this chapter. This increase in the output of the power-stations played an important role in the development of the industry of the country.

As already mentioned, there was little industry in these territories prior to the November (1917) Revolution. Under the first, second and third Five-Year Plans modern big plants were built for the manufacture of cotton and silk yarns, cotton and silk fabrics, leather goods of various kinds, including footwear, cotton-seed oil and printing. Also up-to-date and extensive factories were erected, as one would expect in an agricultural and cattle-breeding Republic, for the canning of vegetables, fruit and meats.

In addition, much was done to increase the extraction of coal, oil, gold, non-ferrous metals, rare elements and the manufacture of building materials.

The total industrial output of the Republic in 1940 was nearly 400 times that of pre-revolutionary days, six times that of 1933 and 66·5 per cent above that in 1937. In this far-off corner of Central Asia—

where before the coming of the Soviet Power " time did not matter "—the " Industrial Revolution " has hurtled forward in seven-league boots.

And the mastery of industrial processes in this Republic is also indicated by the following, amongst many other facts: in 1943 the plan of output of the light industries was exceeded by 2 per cent; that of the food industries by 6 per cent; local industries by 18 per cent, etc. During the first nine months of 1946 the 270 factories of the Republic exceeded their plan of output by 4 per cent.

Since the establishment of the Soviet regime the Tadzhik textile industry has developed considerably. After the conclusion of the war two more cotton-cleaning plants were built in the Republic and all the old mills were rebuilt. The cotton-cleaning capacity of the industry has doubled in comparison with the pre-war level. With the introduction of new production processes, the level of output planned for 1950 in the Post-War Five-Year Plan was reached in 1948.

Great successes have also been achieved by the silk industry, which fulfilled its Five-Year Plan of output in 1949. The output of printed cloth in the Leningrad silk combine increased several-fold in February 1950 as compared with February 1949.

The Tadzhik mills have also mastered the production of new types of crepe materials.

During and after the war years main stress was laid on the building of roads, railways and canals, as well as on the mining and extraction of valuable ores as the principal fields of new construction in industry.

When we were in the Central Asian Republics of the U.S.S.R. we found that the question of irrigation was being everywhere discussed, including the cities. The people are " irrigation conscious " because, as they so often say, " water is life ", and they know from their own hard experience that the control of water is essential to agricultural prosperity.

With the engineering assistance sent by the Central Government in Moscow the turbulent rivers which were previously running to waste have been harnessed, and a number of irrigation systems have been built in western Tadzhikistan and in the mountains adjacent thereto. The most outstanding of these constructions are the Ghissar Canal, the Northern Ferghana Canal and the Vakhsh (Tadzhikistan) section of the Great Stalin–Ferghana Canal. Several of the main canals were dug during the war. The total irrigated area in 1939 was about 720,000 acres, which was 67 per cent above that of pre-revolutionary days.

As just mentioned, industrial development has advanced rapidly, but the Republic is essentially devoted to agriculture, horticulture and cattle-raising, and these have made big strides as compared with 1917. " Farming in Tadzhikistan," stated A. Ilyina, a Soviet writer, " could never have developed without artificial irrigation. During the last few years the whole of the farming area has been furnished with a network of canals which carry life-giving water to the fields of cotton, grain, flax, jute, vegetables and melons and to the vineyards. The Vakhsh Canal has changed an arid desert into a fertile valley."

The cultivated areas under all kinds of crops, vegetables and fruit have grown enormously during the last twenty years, particularly the areas under cotton. Extensive cotton and rice plantations spread themselves out in the irrigated valleys and foothills of the Vakhsh, Panj, Kafirnigan and other rivers. Cotton is now grown not only in the north-west, where it was cultivated before, but also in the midlands and south of Tien-Shan.

Egyptian cotton was introduced for the first time after the November (1917) Revolution. In the beginning the results were disappointing. Even in 1929 the average yield of the cotton crop was only 1·5 metric tons per acre. But the peasants, aided by agronomists and other specialists, persevered, and the yield some years later was raised to about 4·5 metric tons per acre. In 1939 the yield of raw cotton was 171,000 tons and the area under Egyptian cotton was about 100,000 acres.

This Republic has many picturesque and at the same time fertile valleys, and one of the prettiest and most fruitful is the valley of the Vakhsh. The River Vakhsh, from which the valley takes its name, is a tributary of the Amu-Darya, which, as our readers will remember, forms the boundary between the U.S.S.R. and Afghanistan. " Vakhsh " in Tadzhik means wild, and the river certainly lives up to its name as it flings out its muddy waters between the steep banks among the Pamirs for many miles before it reaches the plain below.

The first seeds of Egyptian cotton were planted in this valley in 1927. The next year 141 lb. of seed were planted, and Soviet selectionists went to work to develop their own varieties of long staple Egyptian cotton.

Tadzhikistan is now the principal Egyptian cotton-growing centre in the U.S.S.R., the yields of Egyptian and American cotton-plants are excellent and cotton plantations provide the peasantry with one of their chief sources of income.

On the irrigated lands there are also extensive and rich orchards which yield excellent crops of apples, pomegranates, almonds, pistachios, olives, walnuts and a local variety of oranges and lemons. The finest apricots and the sweetest grades of grapes raised in the U.S.S.R. are grown here.

In the extreme south the sugar-cane is now being grown. This is the one area in the Soviet Union in which this crop is being cultivated, and, in addition, such subtropical fruits as figs and pomegranates are being extensively and successfully cultivated.

Early in 1950 it was reported that lemon and eucalyptus are being cultivated successfully in many collective and State farms of Tadzhikistan, and the area under geranium (for the perfumery industry) is increasing year by year.

It has also been planned to plant mulberry-trees over an area of 37,500 acres during the decade 1950–60. Some 45 million trees are to be planted.

On the non-irrigated lands wheat and barley are cultivated. These crops now cover an area of over 1,500,000 acres, which is considerably above the 1917 area, and the yields per hectare now are much higher. Cereals, and also grapes are now cultivated on the high slopes and tablelands of the Pamirs. Grapes are cultivated at a height of 6,000 feet.

It seems almost unbelievable, but it is a sober fact, that the biological station—on a plateau of the Pamirs, nearly 13,000 feet above sea level —has succeeded in raising sixty varieties of barley, ten varieties of oats and four of wheat, as well as several different kinds of vegetables. This far-away Asiatic Republic is now carrying on agriculture at higher altitudes than any other country in the world.

That is a far greater achievement of science than might be thought if one did not recall how difficult life was on the plateaux of the Pamirs in Tsarist times. A. Polovtsoff, who, as already mentioned, visited the provinces prior to the November (1917) Revolution, wrote:

"The table-land is so elevated and so incredibly barren that it requires a strong heart and a stout one to wander week after week over its desolate wilderness. The Russian soldiers stay there for one year. Each man is first subjected to a minute medical examination, and only those with faultless action of the heart are detailed for this duty. Twelve months later a new detachment comes to take the place

of the previous one, bringing with it all that it may require for the succeeding year, from August to August.

" There is no telegraph line to the Pamirs; and as snow lies on the passes sometimes as late as July and renders them again impassable by October, every precaution has to be taken that the soldiers shall lack nothing for the full year during which they will be so thoroughly cut off from their country that they might as well be in the moon.

" The usual means of communication during the months when the passes are not entirely closed is the native post—men carrying the mails from post-house to post-house on foot. It is done in that way because fodder for horses is unobtainable all the way, and no horse could carry the amount of barley and hay it would require for its own sustenance during the journey; but a man's food being much less bulky, carriers can come over with greater ease. As they are mostly ignorant of the Russian script, a feather is attached to urgent messages, meaning ' Let it fly ', or in other words, ' Use every opportunity for pushing it through as quickly as possible '.

" The question of fodder is so difficult that human inventiveness has full scope for finding substitutes. I once came to a post-house kept by a clever old Kirghiz whose yard was a regular store of ibex heads, some with splendid horns. I complimented him on his marksmanship, knowing as I did what shy game ibex are. He acknowledged having been fairly successful, but added that he had to work so hard under the pressure of necessity, for he required quite that amount of meat for keeping his horses alive through the winter. ' Horses? ' I exclaimed. The old man laughed. ' They cannot expect me to grow barley for them here, so they have had to take to the same diet as myself; it suits them to perfection.' The only vegetation one meets with on the plateau are just a few miserable-looking alpine plants which are no good to anyone, except that their roots are easily ignited and are very useful for lighting a fire." [1]

Tadzhikistan is exceedingly rich in herds. In the mountain pasture lands thousands of horses, cattle, sheep and goats graze. The Republic takes great pride in its fat Ghissar sheep, the biggest in the world. In addition, they also breed an excellent type of Karakul sheep. In 1941 the Republic possessed 578,000 head of cattle and 1,996,000 sheep and goats.

It has been alleged by some " realistic " observers that the collective

[1] *The Land of Timur.*

farm system may be successful on the plains of Central Russia, but that the peasants of hilly countries, to put it mildly, do not take kindly to it. Not for the first time, these timid people have proved to be completely wrong. According to the latest reports, 99·7 per cent of the total cultivated area is worked by the Sovkhozy (State farms) and Kolkhozy (collective farms) and over 97·4 per cent of the dekhkan (local peasants) are organised in the Kolkhozy.

The latest scientific methods are being employed in agriculture. The Biblical wooden plough, the spade and sickle have been replaced by modern machinery. The back-breaking toil of the peasants has been greatly lightened by the hundreds of tractors, combines and motor-trucks organised by the machine tractor stations, and the application of scientific knowledge to agriculture has considerably increased the fertility of the soil.

A brief word about the population. As in other parts of the U.S.S.R., it has grown considerably since November 1917. Between that year and 1939 it increased by 44 per cent. The total population on January 17, 1939, was 1,485,090.

We shall now take a quick glance at the delightful and rapidly growing city of Stalinabad, the capital of the Republic. In passing, we may remark that to reach it by express from Moscow, a seven-day journey is necessary. *En route* one passes through Samara, Orenburg, past the Aral Sea, and through Tashkent, Samarkand and Termez.

Stalinabad was originally a small town called Diushambe, which in the Tadzhik language means "Monday". The explanation is that Monday was market day, and this was a small market town. Then it boasted only one street-lamp, fastened on a six-foot pole on the market square. Drinking-water was sold on the streets by water-carriers. Many of the inhabitants lived in nomad tents or mud huts. The town or village had no rail communication with other parts of the country; the camel was the most usual means of transport. Put briefly, it was a small, primitive Asiatic town without paved streets or sanitation or educational institutions similar to those which still exist in adjoining countries.

The present city-capital, Stalinabad, was founded in 1925, and in 1929 a railway was completed connecting it with other parts of the U.S.S.R. Today this capital presents a pleasant sight. The visitor travels by rail from the ancient town of Termez, within sight of the beautiful Ghissar Mountains, along the banks of the sparkling Amu-Darya (Oxus) River—which separates Afghanistan from the U.S.S.R.

—and finally he sees the city spread out before him at the foothills. The city is very extensive, stretching out between the river and the mountain range, built on terraces which gradually rise from the river-bank to the upper foothills. The massive snow-capped peaks and the wide expanses of the Ghissar Valley are visible from all parts of the capital.

The visitor cannot but be delighted at his first acquaintance with Stalinabad, as he alights at the large station, built in Eastern style. On the square he sees the usual modern means of conveyance—buses and cabs—inviting Eastern tea-rooms, pleasant and airy restaurants, and the shady boulevard bordered by the murmuring aryks (canals).

The first pleasant impression is heightened as the visitor proceeds through the city. The streets are wide, straight and lined with greenery—many of them are, in fact, delightful shady boulevards, with rows of trees and aryks running the entire length. The outskirts are enriched with many parks, which have not been spoilt by being laid out too formally, extensive orchards and flourishing vineyards. Nature, with its sea of greenery, protects this charming garden city from the penetrating rays of the southern sun.

Since 1925 Stalinabad has grown at an enormous rate. Its population jumped from 5,607 in 1927 to 42,225 in 1933, to 83,000 in 1939, and to more than 100,000 in 1945. Many imposing buildings have been erected, particularly during the last ten to fifteen years, and construction, though slowed down, continued during the war. The budget is not a bad indicator of a city's growth: in 1930 it totalled less than 200,000 roubles; by 1945 it had risen to 53 million roubles. The first hydro-electric station was erected in 1927, in the outskirts of the capital, on the River Varzob, and a second station was completed during the war on the same river, but within the environs of the city. These two stations now supply Stalinabad with power for its industries and public utilities.

The capital is now an important industrial centre. It has a large textile mill, a silk factory, a cotton ginnery, a clothing factory, flour-mills, a tannery and shoe factory, a meat-packing plant and a brewery. All these industrial enterprises were constructed during recent years, and the latest addition to this list is a plant for manufacturing parts of tractors and automobiles.

Stalinabad is a centre of education, science and art. It has twenty-three nurseries, forty kindergartens, and in addition to a large number of schools, it has nine technical schools and three higher educational

establishments. Every fifth inhabitant attends an elementary, secondary or higher school. The city has now become a cultural magnet which draws many people from their mountain recesses to obtain a technical or university education. In 1948 a new University was founded in Stalinabad, as well as fourteen institutes, twelve of which are specialising in training foreign language teachers.

The capital contains scientific institutions, research stations and laboratories, which devote their activities to developing the industry and agriculture of the Republic. However, they do much more than that: they are delving into the past and are looking ahead into the future. They also study the history and culture of the peoples of Tadzhikistan, the natural features of the Pamirs and Tien-Shan ranges and the arid sub-tropical regions. The city is well supplied with medical institutions, including a large central hospital, a children's hospital, an eye hospital, two hospitals specialising in infectious diseases, two for tubercular patients, a tropical institute, two children's sanatoria, as well as polyclinics, maternity homes and milk kitchens.

Most of these scientific institutions are under the direction of the Tadzhik branch of the Academy of Sciences of the U.S.S.R., situated in Stalinabad. One of the Institutes of the Academy issued a number of comprehensive dictionaries in 1944, and the first volumes of a Tadzhik–Russian and a Russian–Tadzhik dictionary contained no fewer than 45,000 words each. That is a linguistic-literary achievement of which any modern cultured State could well be proud.

A very fine collection of Tadzhik folk-tales and a well-got-up collection of new works entitled *People's Poets in Wartime* were published before the end of the war. The latter includes the poems and lyrics of the folk-bards who bear the highly-honoured title of " Hafiz " in Tadzhikistan. One of the poems in this fine collection, entitled " We Are Heroes ", by Qwarban Jalil, links the past with the present. It tells of the heroism on the western front of Hazi Kanjayev and Ismail Hamsa Aliyev, who had been awarded the proud title " Hero of the Soviet Union ".

Visitors to the Stalinabad Opera House cannot but be delighted with the fine display of paintings, drawings and sculptures which are exhibited in the larger foyer. One of the finest pictures to be seen there is a large canvas by a noted artist, Ukhamedov, depicting an episode in the Tadzhik struggle against the Arabs in the 8th century.

The authors and composers carried on their artistic work during the war. Before its conclusion the Tadzhik composer Ashradi, a

Stalin prize-winner, had written the music to a new ballet, " Zolizar and Radoba ", based on the book by two noted writers, Bolomat Zade and Kiyamov. When it is remembered how popular the theatre is in the Republic, and how much these beautiful, artistic productions are appreciated, we get some measure of the cultural progress made in this far-distant area of Central Asia since the November (1917) Revolution brought freedom and culture to these people.

For the first time in their history, the Tadzhiks possess their own national theatres. Stalinabad now boasts several theatres: the Tadzhik State Theatre of Opera and Ballet, the Lakhuti Dramatic Theatre, the Russian Mayakovsky Theatre and a Theatre of Musical Comedy.

That is a satisfactory list, but it is not all. The capital also has to its credit a fine picture-gallery, ten cinemas, a state Philharmonic Orchestra, a theatrical school and a school for music. The mobile theatre for collective farms, as well as the song-and-dance ensemble of the border troops, testify to the keen interest which the Tadzhiks, even in their remote mountain villages, take in art. Also the newspapers, magazines and books in the Tadzhik and Russian languages published in large editions in Stalinabad penetrate to the most distant corners of this mountainous republic. Thousands of students attend the cultural institutions of the capital, which are staffed by many teachers and scientists.

Under the fourth Five-Year Plan (1946–50 inclusive) many improvements and extensions to the capital will be carried through. A magnificent new building, worthy of its object, to house the Government of the Republic has been completed. Gorky Street—one of the main thoroughfares—is to be widened considerably; in some parts it will reach a width of 263 feet. A canal passing through the city will have a parkway adorned with fountains and sculptures. The small houses on the outskirts will be replaced by modern two and three-storey apartment houses surrounded with green spaces and children's playgrounds.

New, larger and better-equipped buildings will be erected to house the dramatic theatre, the circus, the Firdousi State Library, the Museum of Fine Arts and the Museum of Local History. The Diushambinka River on which Stalinabad stands will be spanned by three new modern and artistically-finished bridges.

Other improvements include the planting of 60,000 trees, the laying of new water-mains, the establishment of a three-mile trolley-bus line which will connect the old part of the city with the new. Stalinabad,

one of the youngest and most picturesque cities in the U.S.S.R., has grown with a speed worthy of the November Revolution.

In the course of a speech at the Session of the Soviet of the Union on April 26, 1945, Deputy Kurbanov, from the Kulyab Constituency of the Tadzhik S.S.R., said:

> "In Tadzhikistan, where before the Soviet Power schools were literally numbered in single units, there is not an inhabited place now without its school. Today the Republic has a network of 2,225 schools, among which are many continuation and secondary schools. We have in the Republic 7 places of higher education and 20 technical colleges, which thousands of students are attending. Whereas before the October Revolution, throughout the territory of present-day Tadzhikistan, there were only three hospitals, now we have an extensive system of hospitals, polyclinics, medical aid posts and maternity homes. Tadzhikistan has its own engineers, doctors, agronomists, and many thousands of teachers, writers, artists, composers, actors. Tens of newspapers are published in the Republic, we publish our own and translated literature and the classical works of Marxism and Leninism, in our own language, and we have a wide network of radio and cinema. The cinema and radio have penetrated into every corner of the Republic, including the 'Roof of the World'—the Pamirs.
>
> "The creative work of the Tadzhik people grows in strength and volume from year to year. The people play their own music, read their own works, display their multiform, vividly colourful art in all its forms and varieties. The repertoire of the Tadzhik theatres, side by side with the national productions and the works of the Russian classics like Gorki, Gogol and others, include the works of the great English playwright Shakespeare—'Othello', 'Romeo and Juliet'—and also the works of Molière and other classics."

And M. Kurbanov made some very caustic remarks regarding a member (Mr. Graham) of the British House of Commons, who, in a speech December 1944, referred to the Uzbeks and Tadzhiks as "insignificant Asiatic tribes".

As regards public health, it is significant that early in 1948 four hundred doctors attended a congress of medical workers of Tadzhikistan. This figure is particularly striking, since in 1925 there were

only eighteen doctors and five hospitals in this Republic. At the present time the Republic has 137 hospitals and 840 doctors. In 1947, 147 million roubles, or 15 per cent of the Republic's Budget, were spent on the health services.

Inhabitants of highland districts which cannot be reached by horse or on foot are given medical service by doctors brought by ambulance planes. Last year 12,000 patients were transported by air from highland villages to Stalinabad, capital of Tadzhikistan.

The recent congress of doctors adopted an extensive programme of prophylaxis and treatment of malaria and tuberculosis.

As mentioned on an earlier page of this chapter, the Republic of Tadzhikistan includes within its jurisdiction the autonomous region of Gorno-Badakhshan. On April 24, 1943, *Izvestia* published a report by the Secretary of the Communist Party of this region, M. Prishchepa. It is lengthy, but it is so important that we quote it here in full:

"It is customary to begin a description of the Soviet Pamir by saying that this is the 'Roof of the World', that we live at an altitude of from 7,500 to 15,000 feet above sea level, and that during most of the year Gorno-Badakhshan is cut off from the mainland and lives in its own exotic world. But today the inhabitants of Gorno-Badakhshan are not cut off from the rest of the country for a single day. In Khorog, Rushan, Vanch and other counties of the Pamir, radio receivers, powered by electricity derived from mountain torrents, get broadcasts from every part of our country. These broadcasts are reprinted in the newspaper '*Badakhashoni Surkh*', and the news soon reaches the farthest mountain ranges.

"Before the war almost the entire economic life of Badakhshan centred around commodities and foodstuffs brought in during the summer, a process which cost the government huge sums of money. During the years of war, however, Party and government agencies and the collective farm dekhkans have been creating their own economy and are reducing to the very minimum the so-called 'pre-usage' of import of commodities. As a result, the Gorno-Badakhshan Autonomous Region is producing a considerable proportion of the grain and vegetables it requires.

"In 1942 the Region exceeded its quota for acreage sown to winter crops by 27 per cent. This spring the collective farms of Badakhshan are extending the area under spring crops by 2,470 acres. For the

dwellers of the high Pamir, accustomed for decades to plant mere handfuls of land, this figure speaks volumes. For example, in order to increase their sown acreage by 500 acres, the collective farmers of Ishkashim county had to dig an irrigation canal seven miles long. To be more exact, they did not dig it, but hewed it out of the mountain cliffs. The course of the canal passes over a huge chasm. This obstacle was overcome by suspending a sluice across it.

"Every clod of cultivated soil in the Pamir represents colossal efforts, a vast amount of physical labour, and the overcoming of incredible natural difficulties. For that very reason the people of the Pamir value their land most highly and strive to wrest from it all that it is capable of producing. Last Spring the men and women of the collective farm trucked to their mountain fields or, to be more exact, hauled on their shoulders and in their hands, hundreds of tons of natural fertiliser. High-school students who are members of the Young Communist League alone gathered a thousand tons of ashes.

"The land has repaid its masters handsomely for these efforts. Last year Shugnan county recorded an average grain yield of 26 bushels per acre. Individual collectives did even better, Ordzhonikidze Farm getting 44 bushels per acre from its 190 acres and Kalinin Farm taking in 51 bushels on the average, from its 145.[1] In the Vanch county, the collective farm whose chairman is Bibimo Yusupov, a member of the Supreme Soviet of Tadzhikistan, succeeded in doubling its grain crop over the preceding year.

"Until 1934 the Pamir simply did not know what was meant by a potato. The tubers were first brought in and planted by the Red Army's frontier troops. But today this crop is favoured above all others by Pamir farmers. The field gang led by farmer Mirzanobotov of the Stalin Collective has brought in record yields running between 30 and 33 tons per acre, while the researches of the Chichiktin Biological Research Station and the Pamir Botanical Gardens have demonstrated that the markedly continental climate of the high Pamirs and the presence of a high degree of ultra-violet radiation has an extremely favourable effect upon the accumulation of sugar-bearing flour-matter in plants and speeds up the formation of the tubers of the potato.

"Our local scientists are helping the collectives to speed the introduction of new crops. The Pamir Botanical Gardens, directed by comrade Gurskii, has, in the period just past, provided the collective

[1] Since then the yields have been exceeded very considerably.

farms with 40,000 seedlings of fruit trees, berry bushes and grape vines. Not long ago this institution undertook to foster strawberry-growing in Badakhshan and now has a rich collection of varieties of this fruit.

" Strawberries in the Pamir! Who would have dreamed of this just fifteen or twenty years ago, when to grow a head of cabbage in these mountains was the acme of the dreams of the boldest agricultural experts of the Pamir. Not content with these achievements, the Botanical Gardens have worked out a new method of irrigating the porous earth of this area, and this method is now being applied by many collectives.

" The battle for water is, in the conditions of the Pamir, synonymous with the battle for the harvest. For this reason recent years have witnessed a continuous struggle by the peasantry to retain water for purposes of irrigation. But to retain the water means to plant forest belts. Our mountains are not rich in timber, but our collective farmers were able, last year, to carry out successfully the Government's plan for increasing the head of all types of livestock—cattle, sheep, goats and beasts of burden.

" Our farmer's love for their country and awareness of the needs of the fighting fronts is visible in a thousand and one deeds, large and small. Our shepherds and farmers find many ways to make time so as to be able to bring in the valuable deficit minerals to be found in the mountains. Previously it was only geological prospecting expeditions that took any part in this work, but now this sort of mining has become the concern of the entire population.

" Since the outbreak of war the farmers of Gorno-Badakhshan have sent as gifts to the men at the front thousands of pieces of warm wear woven from the wool of our mountain sheep. Of stockings alone, 5,000 pair have been sent. (There are less than twice that number of families in all of Badakhshan.) They have also sent home-woven fabrics which compare with the factory product in quality. Even the school children who belong to the Pioneer organization have contributed by gathering 15,000 pounds of vitamin-bearing sweet briar for our hospitals."

M. Prischepa concluded his report in *Izvestia* thus: " The Pamir is proud of its first city—Khorog. During the war the city has continued to grow and progress. The second section of the Khorog Hydro-Electric Project recently went into operation. The city now has electricity not only for lighting but for other needs, including those

of the local industries. Khorog is not only the administrative centre of Badakhshan, but the centre of its cultural and artistic life. The National Theatre has made veritable alpine expeditions over distances of hundreds of miles to bring the questions of the day to the dark corners of the Pamir in militant word and song, thus mobilizing them for the struggle against Fascism."

In 1949 Khorog had primary and secondary schools and a pedagogical institute.

Young people from the Pamirs are studying at the Tadzhik State University in Stalinabad, and the children of formerly poor, illiterate inhabitants of the Pamirs have graduated as scientists.

In the very heart of Asia, not far from where the U.S.S.R. borders on Afghanistan and China, the swift and turbulent Pandj has its source high in the mountains.

An expedition was sent out by the Tadzhik branch of the Soviet Academy of Sciences to visit this region, and spent five months at the headwaters of the Pandj, in the almost inaccessible valley of Khuf, so high above sea-level that such trees as the wild apricot and mulberry, common to the plains of Central Asia, do not grow there.

The expedition was headed by Professor Mikhail Andreyev, a well-known Russian orientalist, a corresponding member of the Soviet Academy of Sciences. On his return to Tashkent, Nikolai Elizov interviewed him in the garden of his little cottage, where he spends much of his leisure among the flowers he loves so well.

" At one time I was the only European who had ever visited the Khuf valley," he told Elizov. " That was in Tsarist days. Then you could only get there along paths so narrow that two horses could not pass each other.

" Things are very different now. Roads have been built over the mountains, airlines link up many districts. There are telephones, schools and medical services for the mountaineers. But the Khuf valley still seems ' out of the world ', so much so that the people, descendants of the Iranian colonists of Central Asia, have preserved many remnants of their ancient languages and customs. The aim of our expedition was to study these survivals of the past, which give us a key to understanding the culture of the Central Asiatic peoples.

" In the Khuf valley survivals of the past are particularly abundant. The inhabitants of the valley still speak a dialect peculiar to the region, belonging to the Rushano-Shugnan group of the ancient Iranian

languages. We took down the vocabulary of the dialect and materials on its grammar.

" The people of Khuf have preserved in their language a fine distinction between masculine and feminine gender in designating the objects which surround them; such distinctions have mostly disappeared in the languages of Central Asia. Some of the oldest inhabitants even claim to know the principles according to which the division into masculine and feminine gender was originally made, and these principles are often most curious.

" For example, the sky sends down rains as if to fertilise the earth, and therefore, in the language of the inhabitants of the valley, everything coming from the sky—snow, rain and hail—are of the masculine gender. It is interesting to note that one and the same word may be either masculine or feminine, according to circumstances.

" Thus, the water in a river fed by snow from the sky melting from the mountains is masculine. But the water in the spring, which flows serenely from the bowels of the earth, is feminine.

" Special grammatical forms have been preserved for each gender, reflected in pronouns and verb forms. Indeed, the language of the valley is very rich, particularly surprising in its abundance of verbs. Research into its structure will undoubtedly be of the greatest assistance in understanding the origin of various words and place-names in the languages of Central Asia.

" For instance, we have succeeded in tracing the hitherto unknown origin of the name of the Ferghana Valley. In the language of the populations of Khuf and other districts of the Pandj headwaters, the word *ferghana* means a valley enclosed by mountains and possessing an outlet only at one end, which describes the Ferghana Valley perfectly.

" The remnants of ancient customs preserved through the medium of their language are no less interesting. The roots of many of these customs go back to the most distant past. Our expedition noted a number of ceremonies connected with various festivals and events within the clan: the beginning of work in the fields, the marriage of a member of the clan, the birth of a child, burial of the dead, and so on.

" The people living near the Pandj headwaters have preserved a kind of sundial marking the beginning of each new year. The rituals of the new year festival coincide with the rituals we know in ancient Iran of the time of the Sassanids."

Nikolai Elizov concluded: " Professor Andreyev recorded a wealth of legends current in the mountain valley. Among them is a version of the famous myth of the ' Golden Fleece '."

Analysis of the materials collected by the expedition was immediately put in hand.

We make no apology for dealing at some length with the findings of Professor Andreyev's expedition, because they are an additional proof of the many-sided cultural activities of the Soviet authorities.

Another example of these activities can be seen in an article by Professor B.M. Zakhoder, published under the heading " Soviet-Iranian Studies: Sogdian Find in Tadzhikistan ". He wrote:

" Scholars first learned about the ancient Iranian language in which the inhabitants of Central Asiatic Sogdia wrote through a find in China where there was once a large colony of Sogdian traders and artisans.

" The first manuscripts to be found on Sogdian territory, in modern Tadzhikistan, were discovered in 1933. About three kilometres from the village of Heirabad between the stormy waters of the Zeravshan and those of the River Kum there is a huge black stone mountain on which nothing grows; the people call it the ' Kuh-I-Mug ', the mountain of the magician.

" Many centuries have passed since the last Zoroastrian fire-worshipper died in Central Asia or since the last Buddhist shrine disappeared. Even in the most remote mountain fastnesses of Tadzhikistan it is impossible to find anybody who remembers Siyavush, the cult of the black cock. The only relics of the old faith are memories of the soothsayers and magicians.

" In the fantasy of the people the mountain on the left bank of the Zeravshan became the magician's mountain, the ruins on its summit finding their way into various tales and legends.

" The way in which a number of important documents were found on this mountain is in itself like a legend.

" In the spring of 1932, a shepherd from the village of Heirabad, Jur-Ali Mahmad-Ali by name, found a piece of manuscript on the mountain. Although the writing on it was in an alphabet that is known to not more than a couple of dozen scholars in the whole world the shepherd did not throw the manuscript away but took it to the district centre, where it fell into the hands of the secretary of the district committee of the Communist Party.

" Like all secretaries of committees he was a busy man, and although

he understood no more of the manuscript than the shepherd did, he sent it to the Tadzhik branch of the Academy of Sciences, where it was photographed and copies of it sent to Leningrad. Here Professor A. A. Freiman, a scholar well known all over Europe, came to the same conclusion as the shepherd and the Communist Party secretary who knew nothing about the thing—that it was a document of great scientific value. It was, in fact, the first Sogdian document found on the territory of Sogdia.

" An expedition equipped in 1933 discovered 400 items relating to Sogdian material culture, 6 coins and 81 written records on paper, leather and wooden sticks. Apart from the Sogdian documents they found documents in Arabic and Chinese.

" The ' Sogdian Symposium ' issued by the Academy of Sciences in 1934 was the result of careful painstaking work on the part of Soviet scholars, amongst them our famous Arab scholar, I. Y. Krachkovsky; the book told the story of the black mountain in a new way. The ruins proved to be the castle of the local ruler, the ' Sogdian King ' Divastich, and the documents found were his records. V. A. and I. Y. Krachkovsky made a thorough analysis of the Arabic written records, and in an article entitled ' Ancient Arab Document in Central Asia ', published in the ' Symposium ', gave a clear and convincing account of the events that cut short the activities of the ' Sogdian King '.

" This happened in 722 when the Arab general treacherously promised liberty and freedom from molestation to the besieged King if he would surrender, but then, after taking him with him for some time, executed him by crucifixion. After Divastich had been taken away, his records, or field chancellery, were thrown into the ruined castle. Fragments of letters on paper, leather and wood tell eloquently of the tragic and heroic struggle of one of the peoples of Central Asia for their independence."

Professor Zakhoder concluded: " Sogdian documents that have lain in the earth for more than 12 centuries have now become available to scholars, and Iranian philology has been enriched by a number of valuable documents."

Any discovery of this kind is eagerly taken up and investigated by the Academy of Sciences of the U.S.S.R.

And, by way of contrast, the following description of a native festival held in 1947, given by a *Moscow News* correspondent, is highly interesting and significant:

" The Tomasho, a traditional holiday in the Soviet East, is an extremely vivid and colourful spectacle. A fitting climax to a tour of Soviet Central Asia, it served for me as a symbol of the firm ties of friendship that bind the Central Asian peoples and an expression of the unity of the political and economic objectives of Uzbeks, Turkmenians, Tadzhiks, Kirghiz and Kazakhs.

" The Tomasho is something in the nature of a gala, usually held to celebrate the successful completion of field work on the farms. At any rate, the four ' millionaire ' collective farms in the Kanibadam District of the Tadzhik S.S.R. to whose Tomasho I was invited were holding it to celebrate the success of the past agricultural year and in honour of the future harvest, which by all the signs promises to be even better than last year's.

" Tadzhiks and Uzbeks in their colourful robes, Kirghiz in white turbans, Kazakhs in fur-trimmed hats and Turkmenians in heavy sheepskin headgear—about 3,000 in all—gathered on the outskirts of the old-fashioned Tadzhik town of Kanibadam, nestling amid orchards at the foot of the mountains in one of the loveliest corners of the Ferghana Valley. Most of them had come on invitations that had been delivered by special equestrian messengers the collective farms had sent to the nearest districts of the neighbouring Republics.

" The vast conglomeration of diverse vehicles, horses and cars reminded one of a gypsy camp, an impression which was strengthened by the dozens of tents dotting the valley to provide shelter for the overflow of guests, who could no longer be conveniently accommodated by their hospitable hosts. Many of the people gathered around the long tables, set out on the green and piled high with all those delicacies for which the East is famed, had met in the Ferghana Valley before the war when the Uzbeks and Tadzhiks pooled their efforts to build the Ferghana Canal that waters the fields and orchards of the two Republics.

" Loud trumpet blasts announced the opening of the festivities that would last for four days. This was the signal for the beginning of the horsemanship contests which are an invariable feature of Central Asian festivities. These contests demand a great deal of skill and agility from the rider. With his horse galloping at full speed, the rider must bend down from his saddle, snatch up a symbolic trophy and parade it around the field to win the victor's prize. But no sooner has a rider seized the trophy than he is attacked by a dozen other contestants and the tussle is on.

" There was a moment when an avalanche of galloping horses seemed about to swoop down on the ring of spectators, but at the very last moment the riders swerved sharply, sending a cloud of dust in our faces. The crowd yelled its approval or disapproval of the riders in various languages.

" Popular sympathy that day appeared to be on the side of Akhmedjan Sharipov, quite a colourful figure apart from his splendid horsemanship. He has been the chairman of the district's leading collective farm for many years now and is a Tadzhik deputy to the Supreme Soviet of the U.S.S.R.

" The horsemanship contest, which ended with the unexpected victory of an obscure young rider, was followed by an interlude of feasting. Seated at the long tables eating plov, a favourite Central Asian dish made of mutton stewed with rice, these people seemed like old friends meeting after a long separation.

" Conversation during the meal was lively. Forming a sort of younger set, as it were, a group of students of the Tashkent State University—sons and daughters of the Tomasho hosts—sitting next to students of technical schools in Ashkhabad and Frunze chatted about coming exams. Talk among their elders touched on the new Charjou–Kungrad railway that is to connect the Kara-Kalpak Autonomous Republic and the Khorezm Oasis in Uzbekistan with the Tashauz District of the Kara-Kum Desert in Turkmenistan. This was a topic of particular interest to the Uzbeks and Turkmenians who will be going out to help build the line two or three months hence. The Kirghiz, who are at present bending efforts to reclaim 70,000 hectares of land formerly unfit for cultivation in the Chu Valley, listened enthralled to guests from the Vakhsh Valley in Tadzhikistan tell how they are transforming this Valley of Death, as it is known, into a rich cotton-growing area.

" The conversation was suddenly interrupted by the sound of tambourine and the dutar (a sort of three-string mandolin). Within the wide circle formed by the tables, artists invited from Stalinabad opened the concert programme with a performance of a national dance called the Pakhta. Next came peasant dancers and the bakhshi, or bards, without whom no Central Asian festival is complete.

" The first day of the Tomasho ended with wrestling matches held in the Kanibadam town park. Dozens of men contested for championship honours. The winner was a Tadzhik named Tavlyat Mukhamedjanov from Vorkukh, a mountain village 80 km. from Kanibadam.

" I left the park in the company of Turdy Berdiyev, chairman of the Kommuna Collective Farm, who invited me home with him for supper. His house was filled with guests of all nationalities of the Soviet East, among them two Azerbaidjans who had come to Tashkent from a village near Baku to sign a Socialist emulation agreement between the cotton-growers of Azerbaidjan and Uzbekistan for 1947.

" Over the wine which our host brought from the famous wineries at Ura-Tuba not far from Kanibadam, the conversation ranged from the skill of the wrestlers to the late war, in which the peoples of Central Asia and the Transcaucasus had demonstrated their bravery and loyalty to their country. National heroes who had defended their Republic on the approaches to Moscow and Leningrad, in Stalingrad and in the North Caucasus, were mentioned.

" ' Never has the East acquitted itself so honourably as in this war ', someone remarked, and everyone recalled the distant past when the Tsarist Government would not trust many Eastern peoples to bear arms, recalled the former antagonism among the nations which was deliberately fostered by Tsarism to prevent the peoples from uniting.

" ' The Soviet Government reconciled us all,' said Berdiyev and proposed a toast to the Russian people, who have played such a historic role in the destinies of Central Asia.

" The guests greeted the toast with loud applause addressed to the only representative of the Russian people at this peasant gathering, Maria Murkina, an engineer employed at the Kanibadam canning factory, much to her embarrassment.

" The fraternal friendship of the different nationalities is to be seen throughout Soviet Central Asia, where Kirghiz and Tadzikistans study in Tashkent University, where the famous rug-makers of Turkmenistan teach their art to Kazakh carpet-weavers, where Uzbek factories produce ploughs, seeders and mineral fertilisers for all the Central Asian Republics, where an opera written by an Uzbek composer becomes the national pride of all the Eastern Republics, and where people of different nationalities work together to build roads and irrigation canals to be used by all."

The industrious and talented Tadzhik people were busily engaged in peaceful labour when the Nazi Government launched its treacherous attack on the U.S.S.R. in June 1941. Hitler, and not only Hitler, but many " specialists " in the Chancelleries of the Allied Governments and " diplomatic correspondents ", believed that the peoples of

Central Asia would seize the opportunity to revolt against the Soviet Power, or at best they would remain indifferent onlookers, like many of the Asiatic " subjects " of the British, French and Dutch Empires.

These people did not understand in the slightest the burning loyalty of the Central Asian peoples—whether of the Moslem or other religion—to the Soviet Power. They sprang to arms to defend the gains of the Revolution, their freedom and their independence. The Tadzhiks were in the front rank; they fought bravely and skilfully, led by their own officers. Two thousand officers and men were awarded Orders and Medals and seventeen were awarded the title of " Hero of the Soviet Union ".

The record of those who remained at home was on an equally high level. They responded magnificently to the call of the Soviet Power for deliveries ahead of schedule and for increased production. As early as November 1941 cotton and grain quotas were delivered before due date, and in the first nine months of 1941 the small local industries doubled their output as compared with 1940. There was no slackening on the home front as long as hostilities continued, nor, for that matter, afterwards. The troops at the front and the civilian workers at home demonstrated by deeds of valour and prodigious labour their devotion to the Soviet system.

The second World War was over, the demobilised troops and civilians turned again to peaceful labour, to the reconstruction and development of their country; the fourth Five-Year Plan was adumbrated, discussed and approved, and with the dawn of 1946 the Soviet peoples applied themselves to the realisation of that mighty scheme.

Here we shall confine ourselves to the Plan in so far as it relates to Tadzhikistan. The Chairman of the Council of Ministers of that Republic, Mamadali Kurbanov, reporting early in 1946 on the Plan, stated:

" Along with the other Soviet Republics, Tadzhikistan has now commenced the realisation of the fourth Five-Year Plan.

" Tadzhikistan is a cotton-growing Republic. The cultivation of cotton is therefore first on the list for development. The measures outlined for the extension of the cotton plantations, raising the yields of cotton and other agricultural crops will involve extensive irrigation. A large programme is outlined for the Vakhsh Valley, one of the principal suppliers of long-staple cotton in the U.S.S.R.

" Livestock breeding is scheduled for a considerable expansion. Whilst improving and increasing the stock of the collective farms, steps will be taken to provide cows and other cattle to every collective farm household for the personal use of the farmers."

Respecting industry the Chairman stated:

" The principal task of Tadzhikistan's industry is the primary processing of agricultural produce. Consequently, the progress of agriculture will lead to further industrial development. It is expected that in 1950 industrial output will be one and a half times the pre-war volume. This will be accomplished by putting the existing enterprises into full production and by new industrial construction.

" New branches of industry scheduled to be built up in the Tadzhik Republic will include the production of glass and alcohol, machinery, textiles, canned goods, etc. Modern well-equipped enterprises will be built within the next five years."

As regards ores and fuels the Chairman said:

" Ore prospecting and mining, which has made considerable headway during the war, are scheduled for further development. The Plan provides for the construction of enterprises for the extraction and concentration of lead, zinc, tungsten and other ores.

" Special attention will be given to the question of providing the Republic with its own fuel, in view of the fact that Tadzhikistan lacks forests. Coal-mines will be sunk in the neighbourhood of Stalinabad, where adequate deposits have been prospected. *We expect to raise the annual coal production to 100,000 tons, which will fully meet the needs of the Stalinabad industrial district.*"

The " white " coal as well as the black will be harnessed:

" The rivers of Tadzhikistan which flow down from the highlands into the valleys constitute a tremendous source of power. This natural wealth will be placed at the service of the Republic's national economy. A hydro-electric station with a capacity of 13,000 kwh. is to be completed in 1947 on the Varzob River. Another station with a capacity of 10,000 kwh. will be built in the Vakhsh Valley. More than 200 small stations are planned for district centres, villages and collective farms. A plant for the production of small turbines is being built to facilitate this construction."

Construction and road-building have their place:

"The wide scope of construction will require considerable quantities of building materials, and the Five-Year Plan provides for increased production.

"In view of the mountainous nature of the country and the consequent isolation of various districts, the Plan pays special attention to road construction and the development of transport facilities. It calls for improvement of the Stalin Highway in the Pamirs which connects Stalinabad with the Pamir range, along with the construction of the Ziddin narrow-gauge railway in the Varzob Gorge, the Kurgan-Zulyab and Stalinabad-Obi-Garm narrow-gauge lines and a large number of bridges. Comfortable passenger buses will service all the Republic's highways and roads by 1947."

Education bulks large in the Plan:

"Public education and cultural facilities are also to be improved.

"The number of schools will be brought up to 3,123, a very high figure if it is remembered that the 1939 census gave the Republic's population at less than 1·5 millions. It is planned to increase the number of State boarding schools, and to increase the number of teachers' training schools to 11, teachers' institutes to five, and technical high schools to 25. Stalinabad will become the seat of the Tadzhik University."

Other cultural objectives include:

"Five new theatres are to be erected, a new building for the State public library and a regional museum. New stadiums and water-sports stations are being constructed. The medical and sanitation services are likewise planned for further improvements, particularly in the rural districts. There will be a far greater number of health resorts, sanatoria and rest-homes, rural libraries, tea houses and public catering enterprises."

The Chairman concluded his report: "Higher crop yields and industrial development, with the utmost utilisation of all our possibilities, will lead to a considerable increase in production which will ensure high living standards."

The official figures for the Five-Year Plan for Tadzhikistan are as follows:

Capital investments in the Tadzhik S.S.R. during 1946–50 will be

1,200 million roubles, including 318 million roubles for works under the Republic's jurisdiction.

Among new plants to be constructed: electric power-stations with a capacity of 28,000 kilowatts, including hydro-electric stations with a total capacity of 24,000 kilowatts; machine-shops and two creameries, the construction of a fluorspar works completed, and the construction of a lead and zinc mine begun; the capacity of the cotton textile mills in Stalinabad to be expanded by 18,500 spindles.

Extensive exploration and surveying for new deposits of coal, tungsten, antimony and mercury are to be undertaken.

In the industries under the Republic's jurisdiction a coal-mine with a capacity of 100,000 tons is to be sunk and put into operation, and a narrow-gauge railway built to the Ziddin coal-field; 12,000 spindles and a window-glass works are also to be set in operation.

Industrial output by enterprises under the Republic's jurisdiction in 1950 is fixed at 450 million roubles, of which the output of State industries under local jurisdiction and of industrial co-operatives are to comprise 83 million roubles. The output of dried fruit is to be considerably increased.

Principal items of industrial output in 1950 are estimated thus:

Coal (tons)	440,000	Silk fabrics (metres)	5,100,000
Petroleum (tons)	60,000	Hosiery (pairs)	4,140,000
Electric power (kwh.)	180,000,000	Footwear (pairs)	1,370,000
Cement (tons)	15,000	Vegetable oil (tons)	10,000
Cotton fabrics (metres)	17,800,000	Meat (tons)	8,300

Area under crops in 1950: 935,000 hectares, of which 896,000 hectares to be on collective farms; the area sown to grain crops 633,000 hectares, of which 615,000 hectares to be on collective farms; the area sown to industrial crops, 181,000 hectares, of which 176,000 hectares to be on collective farms; the area sown to melons, potatoes and other vegetables 29,000 hectares, of which 20,000 to be on collective farms; the area sown to fodder crops 92,000 hectares, of which 85,000 hectares to be on collective farms. The area to be sown to cotton is fixed at 107,000 hectares, and every effort will be made to develop the growing of long-fibre varieties.

Work to be completed on the irrigation of the Vakhsh Valley, the reconstruction of the irrigation systems in the Ghissar Valley and of the drainage canals in the Kanibadam district. The area of irrigated land to be increased during the five years by 17,800 hectares.

Livestock by the end of 1950: horses, 177,000, including 130,000

on collective farms: cattle, 710,000 head, including 280,000 on collective farms, and sheep and goats, 3,630,000, including 2,000,000 on collective farms.

The plan of State-owned housing accommodation in the towns of the Tadzhik S.S.R. to be made available for occupation in the period 1946–50 is fixed at 291,000 square metres.

By 1950, the number of schools, 3,123, with an attendance of 301,000, and the number of hospital beds, 7,300.

The Soviet Power emerged from the "fiery furnace" of war unweakened. All the omens for the successful completion of the new Five-Year Plan are good. At the end of 1946 and 1947 the results exceeded the schedules.

Rasulov, Chairman of the Council of Ministers, stated in February 1947 that socialist emulation was striving to complete the fourth Five-Year Plan by the twentieth anniversary of the foundation of the Republic, in 1949, and many Tadzhik enterprises have indeed succeeded in doing so.

In the elections of the Supreme Soviet of Tadzhikistan in February 1947 over 99 per cent of the electors voted, and, of that percentage, over 99 per cent voted for the bloc of Communists and non-Party candidates.

CHAPTER X

THE TURKMENIAN SOVIET SOCIALIST REPUBLIC (TURKMENISTAN)

THE territory comprised within present-day Turkmenistan prior to the November (1917) Revolution was divided between three separate States: the Trans-Caspian Region of Turkestan was part of Tsarist Russia; the Charjiui vilayet formed part of the Khanate of Bukhara, and the remainder formed part of the Khanate of Khiva. The territory was under three separate jurisdictions, although the majority of the inhabitants were Turkomans.

It will be remembered from former chapters that the greater part of this area came under Russian control in 1881–85. The Turkmenian stronghold of Geok-Tepe fell in 1881, and the conquest was rounded off with the annexation of the Tedzhen oasis in 1885.

The principal Turkmenian tribes are the Tekkes of Merv and the Tekkes of Attok, the Ersaris, Yomads and Goklans. They all speak closely related varieties of a Turkoman language (of the south-western group of Turkish), and they are Sunni Mohammedans.

Turkmenistan, which stretches from the Caspian Sea to the Amu-Darya, is bounded on the east by the Uzbek Republic, on the west by the Caspian Sea, on the north by the Autonomous Kara-Kalpak Republic, a constituent of Uzbekistan, and on the south by Iran and Afghanistan. The area of the Republic is considerable—189,370 square miles—but its population on January 17, 1939, was only 1,254,000. However, the Kara-Kum (Black Sands) desert, arid but potentially fertile, occupies about 80 per cent of the territory of Turkmenistan. The capital—about which we shall have more to say in later pages—is Ashkhabad, which in January 1939 had a population of 127,000. The other large towns are Leninsk, Kerki, Tashauz and the ancient and famous town of Merv, one of " the keys to India ", to quote the late India Office and the then Government of India.

About 75 per cent of the inhabitants are Turkomans, the majority of whom prior to 1917 were nomads. The rest are Russians, living mainly in the urban areas, and the Uzbeks, Tadzhiks and Kara-Kalpaks in the rural areas.

The life of the Turkmenian people was hard under their native Khans, and it did not improve under the Tsarist Government. Many of the Turkmenian tribes were driven by the Tsarist officials from the fertile valleys into the desert, where they had to live as nomads, wandering with their flocks in search of scanty pastures, whilst Russian settlers occupied the fertile regions around the oasis from which the native peoples had been driven.

Prior to the November (1917) Revolution the native peoples were mainly engaged in agriculture and cattle-raising, and to a limited extent in handicraft production. Today, too, the Republic is mainly engaged in agriculture and cattle-raising, but industry has also been developed. Cotton, cereals and lucerne are the principal crops grown. However, in recent years a good start has been made with new crops, such as plants of essential oils, a rubber-bearing plant and ramine, a fibrous plant used in the manufacture of artificial silk. The sweet, fragrant Turkmenian melons are delicious.

Here, as elsewhere in the Central Asian provinces, prior to the November (1917) Revolution there was a stern and unremitting struggle for the " source of life ", water. Even in the most fertile and flourishing parts the irrigation systems were extremely primitive.

Before the November Revolution, water in Turkmenia was distributed by clans, each Turkmenian clan having its own well, or canal, which was under the control of the clan elders. There are still canals in Turkmenia that bear the names of their former owners. Water was a means of enslaving and cruelly exploiting the poorest peasants, who were scarcely able to earn enough for their subsistence.

The canals were very primitive; there were no sluice-gates, pumps or regulating mechanism; there was no signalling system, and hydrometric observations were not made. The water from the canals had to be lifted into the fields by Persian wheels (which closely resembled those that have been in use throughout the East for thousands of years). Tens of thousands of these wheels were turned by horses, camels, and even human beings during the season. The waterhead to the main canal was closed by a simple earthen dam, and every time it was necessary to open or close the canal thousands of peasants from the whole province, some of them travelling hundreds of miles, would gather to build or dismantle the dam.

The peasants worked the land with the most primitive implements, such as wooden ploughs and harrows. More than 50 per cent of the peasants were so wretchedly poor that they possessed no implements,

and had to hire them, whilst some 28 per cent possessed no draught animals.

Life for the nomads in the desert was a bitter struggle for existence, always on the move for new, meagre pasture for their cattle, and with little modern knowledge of dealing with sick animals. Life was indeed a " struggle for existence " for man and beast. Industry, prior to 1917, was at a very low level. Two-thirds of the output came from a few semi-handicraft shops, small cotton-ginneries and creameries. However, even at that time Turkmenian Tekin rugs made by women were famous throughout the world.

Culture was as backward as agriculture and industry. The Tsarist regime banned the Turkmenian language and aimed at its eventual extinction. Only about 1 per cent of the native peoples could read and write. Even for the Russian officials and settlers cultural facilities were poor. There were only fifty-eight Russian schools in these provinces. The worst sufferers of all were the native women; they were condemned from early girlhood to the disfiguring and unhealthy *purdah* (veil), seclusion and drudgery in vile living conditions. Health services scarcely existed. There were only nine doctors in these provinces, and malaria was very prevalent. To sum up, life in Turkmenistan prior to November 1917 was no doubt pleasant and profitable to the Tsarist officials, much less so for the Russian settlers, and a struggle of ceaseless drudgery for the native peoples.

A railway—and this was also the case prior to 1917—runs from Krasnovodsk, on the eastern shores of the Caspian, through Ashkhabad, Merv, Bukhara, Samarkand and farther east to Tashkent. This railway was originally built for strategic purposes; in fact its construction was essential to the conquest of this area by the Tsarist forces. An English traveller, Clive Bigham, who in 1896 entered these provinces from Iran and travelled along this line, thus referred to its situation and strategic importance:

> " Behind us lay the long, snow-capped ridge of mountains which constitute Iran's last and strongest defence, while in front stretched a sandy desert running hundreds of miles to the north, to be finally lost in the flat, desolate swamps near the Aral Sea. All along and close under that mountain barrier runs the line which, starting from Krasnovodsk on the shores of the Caspian, follows a south-easterly direction until it reaches its most southerly point, Kaakha. From here it runs north-east again to Bukhara

and Samarkand, which in 1896 was the terminus. But the line is now completed as far as Tashkent, 150 miles farther north. The railway is a triumph of strategy, for it commands the whole of the fertile part of Khorasan and at the same time opens up communication between Russia and her provinces in Central Asia." [1]

Several rivers flowing through Turkmenia have their origin outside this Republic; the famous Amu-Darya (Oxus), which borders the eastern frontier of the Republic, separating the Kara-Kum (Black Sands) and Kzyl-Kum (Red Sands) deserts, flows into the Aral Sea; the Murghab, whose source is in western Afghanistan; the Tedzhen; the Atrek and the Sumbar, which have their sources in the towering Turkmeno-Khorasan Mountains, whose lower terraces are covered with pistachio, wild almond and juniper. Later in this chapter we shall deal with the big irrigation schemes planned in connection with these rivers.

As recorded in a previous chapter, the Turkmenian Soviet Socialist Republic was established in October 1924, and entered the Soviet Union as one of its Constituent Republics in May 1925. It now consists of the Ashkhabad, Marysk, Tashauz and Chardzhou Regions.

As usual, the Soviet Government had to tackle several complicated and interlocking tasks at one and the same time, each dependent for its success on the other. It had been assumed that these territories were poor in mineral resources, but scientific expeditions which were sent out by the Soviet authorities reported that, on the contrary, the territory was rich in oil, coal, sulphur, sodium, sulphate, ozocerite, bromine, potassium, common salt, gypsum, sand for glass-making, poly-metallic ores and other minerals. Further, Soviet explorers discovered that the forbidding Kara-Kum desert had an abundance of subsoil, surface water and grass, sufficient to support 5 million head of cattle. The scientific expeditions have not yet by a long way completed their exploration.

The Soviet authorities immediately set to work to exploit the natural resources of the Republic. Under the direction of the Commissariats for Land and Water, both the land and the water supplies of the Republic were nationalised. Some tens of thousands of landless peasants were given land at the expense of the feudal estates. Some four to six years later the peasants began to realise that small-scale

[1] Clive Bigham, *A Ride Through Western Asia.* Published 1897.

farming meant endless toil for small returns, and they began to combine their individual holdings into collective farms. Between 1928 and 1940 more than 100,000 peasant households entered the Kolkhozy, and today these collective farms account for 99·9 per cent of the crops raised in the Republic—striking evidence of the success of this system. Apart from the State farms, the Kolkhozy now constitute practically the only form of agriculture in the countryside of Turkmenia. The Government gave the collective farms 1,376,000 hectares of land in perpetuity.

Machine tractor stations were established. In 1940 there were fifty-seven of these stations, and 4,000 tractors were working on the fields of the Republic. The extent to which these lightened the labour of the peasants can be gauged from the fact that 60 to 70 per cent of the work involved in cotton cultivation, with the exception of cotton-picking, is now done by machinery. The same is true of grain crops.

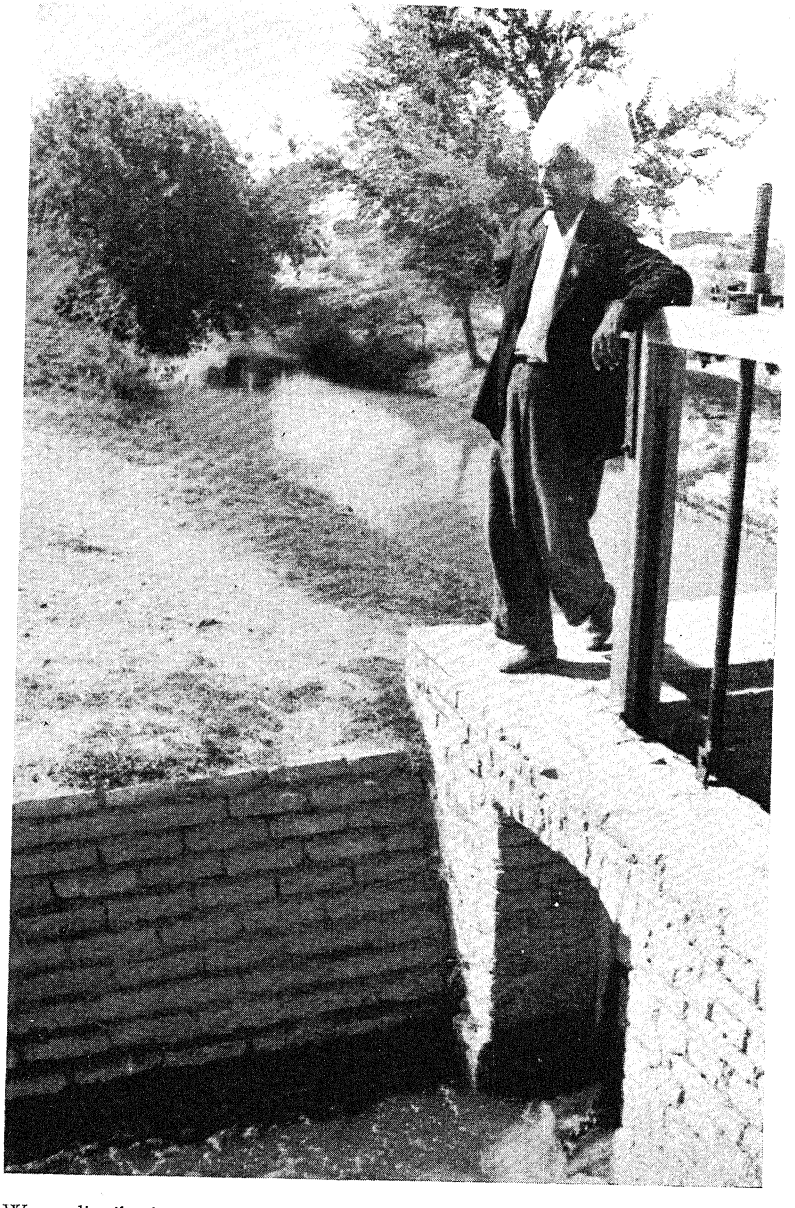
Mineral fertilisers are now used extensively on the collective farms, especially for the cultivation of cotton and lucerne. Every year more than 100,000 tons were transported into the Republic, but during the war, owing to transport difficulties, the collective farmers had to rely on local fertilisers and increased quantities of saltpetre from local mines.

At one and the same time the Commissariats for Land and Water tackled the necessity of improving the old canals, constructing new modern ones and exploiting the water supply to the full. Immense sums were spent on these projects.

All the more or less important water supplies from the Turkmeno-Khorasan Mountains run along concrete beds from the sources to the fields, and the whole system is under efficient control. All the water from the River Murghab is collected in reservoirs that have been built in the last few years. A big reservoir has recently been constructed on the River Tedzhen.

Much has been done to improve the water supplies from the River Amu-Darya (Oxus). The hundreds of tiny canals have given place to twenty large ones. From the headwaters to the last ditch on the farms the whole system is mechanised.

Many of the canals and reservoirs have been constructed in a very short time, and largely by the voluntary labour of tens of thousands of peasants and others. The removal of silt in the past was done by back-breaking labour, but today 80 per cent is done by dredgers. The Republic has three separate excavator stations, which own several dozen machines for cleaning the canals.



Water-distributing centre of the "Bolshevik" Collective Farm in Turkmenia. Aga Yusup Ali, the farm's chairman, is a deputy to the U.S.S.R. Supreme Soviet.

Kazakh herdsman Bairev and Olga Muksreva, student from Moscow, inspect two karakul lambs.

Newspaper-reading time for Turkmenian shepherds.

The distribution points on the canals, dams and reservoirs are now connected by telephone, and the operations are so controlled that the whole system works as smoothly as clockwork.

At the end of the second World War in 1945 many big additional irrigation schemes were decided on. After a preliminary survey, the authorities decided to canalise part of the waters of the Amu-Darya so as to bring water to the arable lands of the Merv and Tedzhen districts. The total area to be irrigated eventually is immense: 250,000 acres in the Tedzhen, 160,000 in Merv, and 55,000 in the south-east Kara-Kum districts. In all, 460,000 acres.

In 1947 a project was ratified for the construction of the first part of the great Kara-Kum Canal in Central Asia. It will extend almost 375 miles, from the River Amu-Darya to the River Murghab, and will irrigate great areas in the desert of Kara-Kum (" Black Sands "). Turkmenia's collective farms will receive new land for sowing cotton and pasturage for sheep. It is estimated that the area under cotton will be about doubled and the yields will go up by 150–200 per cent.

Wind-breaks of trees are to be planted on the canal-banks to protect it from sand-drifts. A number of hydro-electric stations will be built along the canal for the collective farms. The canal may also be used for shipping. Early in 1949 work on the first section was already in full swing.

These immense schemes, in which the entire population is assisting, have been the dream of Turkmenia for centuries. Another colossal scheme which is now being carried out will divert water from the Amu-Darya into the western Uzboi, with the object of taking water across western Turkmenia as far as the oilfields of Kravodsk. When these schemes have been completed, lands that were irrigated at the time when ancient Khorezm and Margian flourished, but which were abandoned after these States had been destroyed by Genghiz Khan and Tamerlane, as well as tracts of land that had never before been cultivated, will come under the plough.

On September 12, 1950, the Council of Ministers of the U.S.S.R. issued a decree on the construction of a great canal in Turkmenia, from the Amu-Darya to Krasnovodsk. This, in the words of the decree, is to ensure " the supply of water for industrial enterprises, the irrigation of new lands, mainly for the development of cotton growing, the supply of water for pastures and the further development of the fodder base for stockbreeding in the southern areas of the Caspian plains of Western Turkmenia, the lower reaches of the River Amu-

Darya and the Western part of the Kara-Kum Desert, and the supply of hydro-electric power for industry and agriculture in these areas."

The Canal will be 1,100 kilometres (about 700 miles) long, it will run from Takhya Tash on the River Amu-Darya, and encircling the Sary Kamysh depression, south-west of the Aral Sea, it will continue through the Kara-Kum Desert along the ancient bed of the Uzboi into the waterless areas of the Caspian plain of Western Turkmenia, reaching the Caspian Sea at Krasnovodsk.

A dam will be constructed on the Amu-Darya at Takhya Tash and two dams with large water reservoirs on the main Turkmenian Canal.

Three hydro-electric stations—one on each dam—with a total capacity of 100,000 kilowatts will be constructed.

Large branch irrigation and water-supply canals will be built with a total length of 1,200 kilometres, leading from the main Turkmenian Canal and the Takhya Tash dam, for the irrigation of lands in the southern areas of the Caspian plain of Western Turkmenia and on the lower reaches of the River Amu-Darya.

Thus it will be made possible to irrigate and bring under cultivation some 1,300,000 hectares of hitherto waste desert land for the development of cotton-growing, including 500,000 hectares in the southern areas of the Caspian plain of Western Turkmenia, 300,000 hectares in the area of the delta of the River Amu-Darya and 500,000 hectares in the Kara-Kalpak Autonomous Republic (within the Uzbek Soviet Socialist Republic) and in the northern areas of the Turkmenian Republic.

Moreover, it will bring an abundant supply of water for the homes, industries, railways, etc., planned for Western Turkmenia.

In addition, it is proposed to undertake the planting of forest belts and the fixation of sand along the main Turkmenian Canal, and the large branch irrigation and water supply canals, along the land bordering on the new irrigation system and around industrial enterprises and inhabited localities, over a total area of about 500,000 hectares.

Work on the canal will begin in 1951, and it is hoped to complete the project by 1957.

In the course of an interview the Deputy Minister of Cotton Cultivation of the U.S.S.R. drew attention to the different course of the Amu-Darya River in ancient times and *inter alia* declared:

> " The idea of bringing life to the desert by turning the course of the River Amu-Darya towards the Caspian Sea originated as

long ago as in the time of Peter I. Yet Tsarist Russia was incapable of carrying it out. It was on the initiative of Stalin that the Government's decision was taken to revive the desert and fulfil the age-old dreams of the people of Central Asia.

"The special characteristic of the present scheme is that the waters of the Amu-Darya will be used in their entirety for irrigation and will not be discharged into the Caspian Sea as proposed in all the preceding projects.

"The length of the main Turkmenian canal from the Amu-Darya to Krasnovodsk is only comparable with the great Chinese Canal. All the remaining canals of the world, including those in America, Egypt and India, are considerably shorter.

"Water-supply canals will extend deep into the Kara-Kum Desert. Moreover, the extensive construction of wells and reservoirs in the desert is also being planned. Forest plantations over a total area of about 1,250,000 acres will transform the desert.

"Millions of tall trees—mulberry, white acacia, poplar and karagach—will rise over the irrigated lands along the canals. On the un-irrigated land wide belts of shrubs will be planted.

"Krasnovodsk will receive an abundant supply of water. Orchards, vineyards and olive groves will spread over Western Turkmenia. The new irrigation construction is an important link in the great Stalin plan for the transformation of nature. The Caspian desert plain will soon be converted into a marvellous flourishing land."

Pravda, referring to the projected canal, said:

"For ages, the peoples of the Orient had been cherishing the dream of crystal-clear rivers and flourishing orchards in the desert, the dream of a fairyland of happiness. Now only a few years separate us from the time when the desert of black sands will be converted into a golden valley of fertility.

"A blossoming carpet of orchards and meadows will clothe areas hitherto scourged by hot shifting dunes, bright electric light will illuminate the deserts where formerly even the bonfires of nomads were rare. Artificial seas, canals and pipe-lines will bring life to vast tracts of arid land where the people used to die of thirst and heat along the ancient caravan routes."

But the canal will do even more than revitalise the desert, it will also form a convenient direct waterways link between the Republics of Central Asia and the European part of the U.S.S.R. As a spokesman of the Ministry of the River Fleet of the U.S.S.R. pointed out:

" With the completion of the work on the main Turkmenian Canal and the opening of the canal to shipping, the Soviet Union will have a wide inter-communicating network of inland water-ways over which cargoes will be carried from the shores of the Arctic Ocean to the blossoming oases of Central Asia.

" This great water-way will pass along the Stalin White Sea–Baltic Canal, enter the Volga with its vast reservoirs at Kuibyshev and Stalingrad, cut across the Caspian Sea and pass along the main Turkmenian Canal to the River Amu-Darya. So far there has been no direct water-way between the Amu-Darya Basin and the European part of the U.S.S.R.

" Over the new water-way ' White Gold '—cotton—will be carried from areas in the depths of Central Asia direct to the textile mills in the central industrial areas of the country. Grain, agricultural machinery and various kinds of industrial equipment will travel from the centre of the country to Central Asia.

" With the completion of the main Turkmenian Canal it will be possible to organise a direct Moscow–Amu-Darya water-way."

Important achievements have been accomplished in the struggle against pests, and especially against locusts.

Collective farming, large-scale irrigation and mechanisation of agriculture demanded a large number of specialists. With this aim in view, a big network of agricultural schools was set up in the Republic. The Kalinin Agricultural Institute, which has been functioning in Ashkhabad for many years, has given thousands of agronomists, engineers and mechanics to agriculture. In addition, agriculture and irrigation specialists have been trained by several agricultural high schools. More than twenty special schools in the Republic are training tractor and truck-drivers, mechanics, book-keepers, etc.

Scientific work in agriculture is directed by the Biological Institute of the Turkmenian branch of the Academy of Sciences of the U.S.S.R., which has a large network of experimental stations, fields and sectors, including the Repetek Station for the study of sand deserts. Furthermore, the People's Commissariats of Agriculture and Water Supply

have a number of their own scientific institutions dealing mainly with urgent problems in applied agriculture.

Since the establishment of the Soviet regime many industrial enterprises and settlements have been established in the Kara-Kum desert. Sand-storms, however, cause enormous damage there from time to time. To study ways and means of coping with this, a special laboratory attached to the Turkmenian Branch of the Academy of Sciences of the U.S.S.R. has been formed in Ashkhabad.

This laboratory is equipped in accordance with the most modern technique. Exact desert conditions are reproduced, and the effects of sand-storms, as well as methods of combating them, can be studied, and cine-photographs made.

The collectivisation and mechanisation of agriculture, coupled with extensive irrigation and other measures, have produced important results. By 1940 the cultivated area had increased 200 per cent, while the yields had doubled and trebled, and the yields in the case of some crops had risen by 500 per cent. Before the second World War cotton yielded on the average 1·6 to 1·7 tons per hectare, and some collective farms even exceeded an average of four tons. Especially marked were the increases in the yields of Egyptian cotton. At one time some people were of the opinion that Egyptian cotton would deteriorate in Central Asia. Collective farmers and Soviet agronomists disproved this contention. Mass cultivation of Egyptian cotton in Turkmenia began about 1930, and in the space of three or four years the average yield for some of the Egyptian varieties reached 1·5 to 1·6 tons per hectare. Some districts achieved an average of 2·8 tons per hectare.

The Soviet varieties of long staple cotton have been developed since then. During the war, agronomist Maximenko introduced cotton with naturally coloured staples (brown, green, etc.). The importance of these varieties cannot be over-estimated.

Livestock breeding attained a high level in the Turkmenian S.S.R., not only in the desert area, but also in agricultural districts. Turkmenia is famous for its splendid racing horses, especially the Akhaltenkin breed. They were the talk of the country in 1935, when they made the Ashkhabad–Moscow race, covering more than 4,000 kilometres, through deserts, mountains and forests, in eighty-two days. Equally famous are the Turkmenian karakul sheep. Hundreds of thousands of these skins are exported abroad annually. Most karakul sheep are raised by collective farms. But there are also twelve big State farms in the Republic engaged in karakul-breeding.

Artificial insemination to improve the quality and fertility of various breeds of livestock is being practised on an ever-increasing scale.

The organisation of State and collective farms resulted in a considerable increase in the Republic's cattle herd, which has more than doubled since 1935, while the number of sheep has trebled.

Hundreds and thousands of splendid Turkoman organisers and specialists in agriculture and skilled workers, such as collective farm chairmen, agronomists, hydrotechnicians, mechanics, tractor drivers, livestock specialists, etc., have been trained during the reconstruction and development of agriculture in the Republic. Hundreds of outstanding agricultural workers of Turkmenia have been decorated by the Government of the U.S.S.R.

Turkmenia's agriculture was advancing rapidly when Hitlerite Germany attacked the Soviet Union. This necessitated the direction of agriculture to the needs of defence. The area under grain crops was considerably extended, and a number of new industrial crops, such as tobacco, were introduced. Sufficient cotton and silk was also raised for the textile industry.

The cultivated area of the Republic increased by 26 per cent during the war, which was the figure scheduled in peace-time plans for 1946. The increase in the cultivated area and yields eliminated the necessity for hauling grain from afar, and thus released transport for the needs of war.

As already mentioned, the Caspian Sea constitutes the western frontier of Turkmenia. This great inland sea abounds in salmon, sturgeon, herring and perch. Here the world-famous black caviare is obtained.

Industrial development, worthy of the name, began with the coming of the Soviet Power, and it made marked progress during the Five-Year Plans. Over 2,500 million roubles were invested in industrial construction in the course of the pre-war Five-Year Plans. Between 1925 and 1945 over 350 new plants and factories were constructed, including oil-cracking, chemical (sulphur and sulphates, iodine, bromine, etc.); textile (cotton, woollens, silks, etc.); light industries (shoes, knitwear goods, clothing); food (wine, confectionery, butter, meat, etc.); building materials, glass and lime.

Marked progress was made by the oil industry. The Republic's principal oil district is in Nebit-Dag, where new oilfields and a new refinery have been completed. The output of oil had increased by

1943 more than sixfold, compared with the pre-revolutionary level, and there is every reason to expect that it will increase still more in the future. Geological prospecting has revealed the presence of oil in other districts of the Republic.

In 1928, when Academician A. Fersman and Professor D. Shcherbakov crossed the Kara-Kum Desert from Ashkhabad to Khiva, they found sulphur deposits in the Chemberli and Darvaz hills, right in the heart of the desert. In the intervening years the desert has yielded thousands of tons of high-grade sulphur. Sulphur deposits have also been tapped in other districts.

A chemical plant functioning in the Kara-Bogazgol Gulf draws most of its raw materials from the water of the gulf, which, by virtue of its natural conditions (isolated from the sea and intensive evaporation), is eighteen times richer in minerals than the waters of the Caspian Sea. Among the new textile and food enterprises erected between 1924 and 1940 were a cotton mill, confectionery works and a meat-packing plant at Ashkhabad, silk-reeling mills in Ashkhabad and Charjiui, a big flour-mill in Ashkhabad, and another in Charjiui. Two modern plants replaced small creameries in Bairam-Ali and Tashauz, with an output ten times as big. Cotton-ginning has likewise undergone reconstruction—instead of twenty-one small ginneries, which produced a total of 76,000 tons of cotton, there were six big ginneries by 1943 with an annual output amounting to 250,000 tons of cotton.

Several clothing, knitwear goods and shoe factories have been built at Ashkhabad, Merv and Charjiui. In addition to big building-materials enterprises established at Ashkhabad, Krasnovodsk, Merv and Charjiui, a cement mill was constructed at Bezmein near Ashkhabad.

The development of transport facilities and mechanisation of agriculture have resulted in marked progress for the metal-working industry.

Large-scale fisheries have been established on the eastern shore of the Caspian. There is a motor-boat station, a fish-processing plant and refrigerator for the catch, which increases from year to year.

Turkmenian women are famous for their skill in rug-making. The production of the famous Tekin and other rugs is now concentrated in the co-operatives, which receive extensive aid from the Government. Turkmenian rugs are as famous as Bukhara rugs. They make up nearly 50 per cent of the total export of rugs from the Soviet Union.

Today the factories and plants built in Soviet times are responsible for 96 per cent of the Republic's industrial output. A fundamental

change has taken place in the correlation of industry and agriculture. Whereas agriculture was responsible for 72 per cent of the Republic's total output in 1925, the first year of its existence, Turkmenian industry by 1945 was responsible for 76 per cent of the Republic's production. In 1950, large-scale heavy industrial enterprises accounted for about 42 per cent of all industry in the Republic. These achievements of industry are all the more impressive because in the same period the output of agriculture has increased three-fold. As a result of the Soviet policy of industrialisation, Turkmenia has now become an industrial country.

To carry through this great industrial development the Government of the Republic had to spend big sums on rapid training courses for newcomers to industry. The majority learned quickly and well, and Turkmenian industry, thanks also to good technical schools, now has very many highly-skilled workers, technicians and directors. Many have been decorated both for their initiative and achievements in production.

Prior to the November Revolution, Turkmenia was as backward culturally as she was in all other respects.

The Soviet Power brought education to the masses of the people, and soon after it had been established work was begun everywhere on the building of schools, and free compulsory education was introduced. Secondary and higher schools were opened, and an extensive network of clubs, libraries, reading-rooms, museums, cinemas, theatres and other establishments of a cultural nature was organised, on which the Turkmenian Government spends about 300 million roubles annually. In 1950 the Republic had 1,230 schools, attended by over 200,000 pupils. Already in 1941 the seven-year schools were obligatory in all towns, and in over half the rural areas. By 1950 the seven-year school was made compulsory for the whole of the Republic, whilst the ten-year school was common in the towns.

There are dozens of Turkmenian hamlets in the middle of the desert. They are inhabited by collective and State farm shepherds, who drive their flocks from well to well. Boarding-schools have been established for their children, where they are provided with full board and education at the expense of the State.

The Soviet Government has done much to make the country 100 per cent literate. Schools for this purpose have been in operation since about 1928, and they were attended by between 180,000 and 200,000 people. All adult, as well as other, schooling is free.

The measures adopted by the Republic have almost achieved the

objective of 100 per cent literacy, and only those who are too advanced in years to learn remain illiterate.

In 1950 there were thirty technical secondary schools, training about 10,000 students for many trades and professions, including teachers, agro-technicians, mechanics, etc. There were also five higher schools or colleges, a Medical Institute, a Pedagogical Institute, two teachers' Training Colleges and an Agricultural Institute. Four of these higher schools are in the capital, Ashkhabad. The total number of students was over 4,000.

Amongst other cultural institutions in the Turkmenian Republic, clubs hold an important place. In 1950 there were 315 urban and 850 Kolkhoz clubs, and about 500 cottage reading-rooms, halls of culture, etc., in rural districts. Every important industrial concern, State farm or collective farm has its own club, with a theatre, cinema, library and reading-rooms, and a number of rest-rooms for members. In addition, there were 552 public libraries, a number of trade-union libraries and special libraries, belonging to the research institutions. There were also a number of cinema units and mobile libraries that pay regular visits to the more distant parts of the Republic. The villages are being connected by telephone with the larger towns as rapidly as possible.

Scientific research is flourishing in the Republic, and since 1940 a branch of the Academy of Sciences has been working in Turkmenia. The branch co-ordinates and guides all research work in the Republic, and includes five research institutes—an Institute of History, Language and Literature, Geology, Technology, Botany and Zoology. The Institutes, in their turn, maintain a number of experimental stations, field gardens, laboratories, etc. In all, the Republic has over fifty research institutes employing more than 500 scientists. A large number of expeditions were fitted out in 1948 by the Turkmenian branch of the Soviet Academy of Sciences.

In the course of a report on February 25, 1950, to the Presidium of the Academy of Sciences, on the work of the Turkmenian Academy of Sciences, it was stated that it [the Turkmenian Academy of Sciences] had carried out the classification of soils in Turkmenistan, and had worked out methods for the economic development of desert districts. Turkoman philologists had published a number of classical works of the literature of Turkmenistan and dictionaries, and textbooks on the language and literature of the Republic have been compiled for the use of schools and higher educational institutions.

Of outstanding importance are the results of the archæological expedition which discovered valuable remains of Parthian culture.

Parts of Turkmenia are subject to earthquakes. These districts are being visited by members of the Physico-Technical Institute, who will compile seismological charts of the Republic.

The bulk of the 1948 season's field work was being done by the Institute of Botany and Plant Cultivation, which sent out fifty-three expeditions, whose principal aim was to help expand farming and live-stock breeding. This, too, was the object of six expeditions to study salinity, in order to facilitate the reclamation of wastelands for agri-culture.

In this connection it is interesting to note that the Turkmenian, Tadzhik and Kirghiz branches of the Academy of Sciences have together worked out successful methods of struggle against excess of salt in the soil of cotton-growing areas, discovered new areas for pasture and prepared maps on flora and soil.

With herds growing year by year, the fodder problem looms large. In 1948 two scientific teams investigated the grazing possibilities of south-eastern Kara-Kum.

The Zoological and Zoo-technical Institute sent several members of its staff to the State farms to work out methods of improving the quality of the famed karakul skins, of which Turkmenia is one of the biggest producers.

As for the humanities, further study of the various dialects of the Turkmenian language is the task assigned to several groups from the Institute of History, Language and Literature. Two large expeditions were fitted out by the Ethnographical Museum. One was scheduled to follow the Amu-Darya River from Termez to the Aral Sea, while the other was to investigate the valleys of the Sumbar and Atrek Rivers.

Little attention was paid to health and medicine in these provinces prior to the November Revolution. However, public health organi-sations have increased with amazing rapidity under the Soviet Power. In 1940 the public health bodies controlled over 2,000 institutions, including hospitals, pharmacies, maternity homes, out-patients depart-ments, welfare centres, etc. All medical treatment is free. Malaria, which formerly was very prevalent in Turkmenia, is gradually dying out; fresh infections are extremely rare. The Republic's thirty-five tropical stations carry on mainly prophylactic work, employing all known methods to destroy the larvæ of malaria-bearing mosquitoes;

drying out the swamps, sprinkling water deposits with oil; dusting the growths of reeds, from aircraft, with Paris-green, and breeding small fish that feed on mosquito larvæ, etc.

Special care is paid to the health of the children. They are cared for by the Public Education Authorities, trade unions, collective farms and other organisations, in addition to the public health bodies. Throughout the Republic there are nurseries, kindergartens, welfare centres, milk distribution points, playgrounds, summer camps, children's sanatoria, etc. These measures have given good results, and the present generation of children is a healthy one.

Considerable research is carried on in Turkmenia for the study of local diseases. In addition to the Turkmenian State Medical Institute, there are a number of special research institutes studying, for example, malaria and the methods of combating it. Amongst them are the Tropical, Trachoma, and Bacteriological Institutes.

The second World War left its mark on Turkmenia. Despite the fact that large numbers of medical workers joined the Red Army, the normal work of the public health organisations had, however, continued. Considerable work was done amongst the wounded for the treatment and cure of officers and men.

Side by side with the Russians, Ukrainians, Byelorussians and other peoples of the Soviet Union, the Turkmenians fought against the invaders on all fronts from the first day of hostilities. Thousands of Turkmenians were decorated by the Government with Orders and Medals for exceptional bravery in action. Seventeen of the bravest sons of the Turkmenian people have earned the title of Hero of the Soviet Union.

The war gave added impetus to the development of industry in Turkmenia. New enterprises launched in peace-time started production during the war. A number of enterprises were evacuated there from districts threatened with invasion in the early stages of the war. Some of the existing enterprises were rebuilt and extended to meet the needs of war. In those trying days when the German invaders reached the northern Caucasus and the Volga at Stalingrad, the workers of the Ashkhabad railway and Krasnovodsk port played an exceptionally important role by ensuring an uninterrupted stream of troops, armaments and supplies to the front.

Later, when the need arose to help restore the Nazi-ruined economy in the liberated areas, Turkmenia sent sixty-six carloads of various goods and equipment, as well as gifts for the population, to Stalingrad.

The Turkmenian collective farmers sent 56,000 head of large and small horned cattle for the restoration of the livestock breeding farms in the liberated districts, including 41,000 head for the Ukraine. The population of the Ashkhabad region adopted the city of Yelnyn, which was liberated by the Turkmenian division, and helped to restore normal life there.

We shall now turn to the capital of Turkmenia. At the borders of the Kara-Kum Desert and the Kopet-Dag Mountains, on the railway line connecting Central Asia with the Caspian coast, lies Ashkhabad (former Poltoratsk), the capital of the Republic. It is a city of dry subtropics, of glaring sunlight, blue southern skies, and fertile oases in the Kara-Kum, situated at the foot of majestic mountains—not without reason did the Turkmenians call Ashkhabad " the City of Love ".

Along its straight, wide streets, through its broad squares and parks, stretched rows of mulberry- and plane-trees, black elm, thuja and acacia that merged with the fruit-orchards and vineyards which thrive in almost all the gardens of the city. The streets are lined by *aryks*, or irrigation canals, through which water runs from small streams, artesian wells and *kyarizes* or underground stores of water. Today Ashkhabad has big water-mains.

The city was founded in 1882, on the site of some ancient Turkmenian settlements. In 1885 Ashkhabad was connected by railway with the Caspian Sea, and in 1906 by a through line with Central Russia.

Nevertheless, up to Soviet times it remained a small trading and provincial administrative town with almost no industry. After its promotion to the status of capital of Soviet Turkmenia, the city made rapid progress in economic and cultural life. The population grew rapidly: in 1920 it was 26,000, at the beginning of 1939 it had reached 126,600. Since the establishment of the Soviet power the Turkmenian section of the population has grown rapidly: in the years between the last two censuses (1926 and 1939) the Turkmenian population of Ashkhabad grew 5·5 times. Besides Turkmenians, the city is inhabited by Russians, Ukrainians, Armenians, Azerbaijans, Kazakhs and Tatars.

The capital had been enriched by a number of industrial enterprises, which produced large quantities of cotton thread and fabrics, silk, knit-goods, footwear, clothing, glass, wines, meat products and flour. The new glass factory and meat-packing plant were among the foremost enterprises in their branches of industry. Also outstanding were

the silk- and cotton-mills, the latter being supplied by the ginning-mills of the Republic. Ashkhabad rugs have long been famed far beyond the borders of Turkmenia. The city had an electric power-station operating on oil extracted not far from its environs. There were 14,000 workers employed in Ashkhabad in 1943, seventy times more than before the establishment of the Soviet power.

The capital has become the cultural centre of Soviet Turkmenia. It had in 1943 thirty-two schools, twenty technical schools, four higher educational establishments—a pedagogical, a teachers', an agricultural and a medical institute—numerous scientific stations and laboratories.

The scientific research institutions are engaged on problems related to agriculture, industry and public health. Of particular significance for Turkmenia are the scientific establishments in Ashkhabad which are studying the problems of distilling salt water and of utilising solar energy for technical needs. Ashkhabad is the headquarters of the Turkmenian branch of the Academy of Sciences of the U.S.S.R., established during the second World War.

Wide recognition has been won by the Turkmenian musical and Russian drama theatres, the philharmonic orchestra and the territorial, historical and art museums. The local cinema studios produce popular films which reflect the life and development of the Turkmenian people.

New large buildings were being erected, the streets asphalted and the parks extended. Automobile roads have been built from Ashkhabad into the Kara-Kum and to the canyons of the Kopet-Dags. During the war Ashkhabad continued to grow and flourish, at the same time increasing its efforts to aid the front and ensure victory.

All that has been said about Ashkhabad relates to the period before the very violent earthquake to which it was subjected on the night of October 5–6, 1948—the worst in its history.

Ashkhabad industrial enterprises, administrative buildings, the majority of residential buildings, the city and railway stations, communications, institutions and cultural institutes were destroyed. The earthquake claimed thousands of victims.

Help poured in immediately from Moscow and every part of the U.S.S.R. Rail communication between Ashkhabad and the rest of the country was seriously damaged, and was at a standstill for three days, but an airlift was organised immediately, and brought medicaments, food, household goods, etc., to the stricken population, evacuating the wounded, the aged and the orphaned children on their return journey.

Standard pre-fabricated houses, more clothes, bedding, boots and shoes, soap, etc., were despatched when rail communications were restored.

As soon as the most urgent needs of the population were satisfied, plans were drawn up for the rebuilding of Ashkhabad, and these are being carried out as speedily as possible. Numerous dwellings have been restored, and life in Ashkhabad was back to normal in 1949. At the same time it was decided to draw up a plan for the complete reconstruction of the town within some twenty to twenty-five years. When this plan has been implemented, " the capital of Turkmenia ", in the words of architect Baranov, " will become one of the best-planned towns in the Soviet Union, with all modern amenities, beautiful buildings, broad thoroughfares, parks and gardens. Broad vistas and avenues will radiate from the central square, which will be lined with buildings housing Government institutions.

" A central park of culture and rest will be laid in the eastern district and another big park with sports stadiums, playgrounds and open-air theatres will be laid in one of the suburbs. Much space is earmarked for the construction of bungalows, with gardens watered by a network of canals. Magnificent architectural ensembles, new schools and theatres will add to the beauty of the town. At present architects are designing a project for buildings which will house the Turkmenian branch of the U.S.S.R. Academy of Sciences, Ashkhabad Observatory and Central Seismic station."

One of the big items in the post-war Five-Year Plan is the construction of a railway from the Transcaspian Line to the Aral Sea. This project is so important that we quote here at length from an article on the subject from the pen of Mikhail Ilyin, published in December 1947. He wrote:

" One of the great railway-building feats of all time is being carried out in Soviet Central Asia.

" A few months ago the restless wind was the only intruder in this wilderness of shifting dunes. Then one October day an army of 70,000 people crossed the horizon, making for the Amu-Darya River, which flows between the two great Central Asian deserts, the Kara-Kum (Black Sands) and Kzyl-Kum (Red Sands).

" They had come to carry out a task laid down in the Five-Year Plan—to build a railway from the Transcaspian Line to the Aral Sea. Among them were doctors and postmen, actors and acrobats, barbers

and shoemakers, sales clerks and cooks and lecturers. Of medical workers alone there were 1,200, who organised a regular hospital service.

" The new railway line will bring the collective farmers immense benefit, and the collective farms of Uzbekistan and Turkmenia have sent big, enthusiastic contingents to speed the work. Cotton-growing is the foundation of their well-being, but so far the Amu-Darya valley has grown only a fraction of its potential crop. Shortage of transport is the reason. The river route can handle strictly limited shipments, for the Amu-Darya is only navigable from April to November. Last year mineral fertilisers were sent by air as well as by river: even so the cotton-growers of the valley were able to use only one-tenth of the average needed by the Uzbek and Turkmenian collective farms.

" There are miles of fertile land waiting only for a plough to till it and water to irrigate it, but at the moment the region is growing as much cotton as can be shipped out with the available transport. The same factors limit the cultivation of rice and other crops.

" Before the Revolution the chief means of transport in these parts was the camel, and caravans laden with rice, wheat, cotton and wool used to pick their laborious way across the Kara-Kum and Kzyl-Kum. But at that time agricultural production was only a fraction of what it is to-day.

" The new Kara-Kum railway will solve the transport problem, replacing the camel by the diesel locomotive, and make it possible for the collective farmers to get the best out of their land. The lower reaches of the Amu-Darya will become a major cotton, wheat, rice, wool and fruit-producing area.

" The idea of building a railway across the desert is not new. Attempts were made before the Revolution—in 1899, and again in 1913—to survey a route: but like other great projects, such as the Turksib Railway and the irrigation of the Hungry Steppe, the Kara-Kum scheme was destined to be realised only in Soviet times.

" Soviet life, in all its cheerful, busy variety, has invaded the desert along with the construction crews. In the evening when the moon rises and the sandhills turn blue, cinema operators set up their portable projectors, professors give science lectures, hundreds of wall-newspaper editors get busy in their offices among the dunes, and brilliant companies of actors, musicians and singers entertain the multitude, relaxing in the desert moonlight after their day's labours.

" To subjugate the sand is not easy. In good weather the desert

looks merely inhospitable; but let a slight wind rise, and it begins to bare its teeth and strike at the intruder. The advance of the shifting sands, which if left to themselves will obliterate man's handiwork in a few hours, is stopped by the planting of wind-breaks of reeds along the permanent way. Tame, man-made dunes are created on either side of the line, protecting it from the inroads of the desert."

Mikhail Ilyin concluded :

" The first trains will run along the line next autumn. By 1950 the Amu-Darya Valley will be transformed with new factories, mines and towns. Canals will carry water deeper and deeper into the desert, and gardens will flower as far as the horizon, smiling evidence of Soviet man's triumph over to-day's barren wilderness."

In conclusion we shall deal in summary form with Turkmenia's role in the first post-war Five-Year Plan, 1946–50.

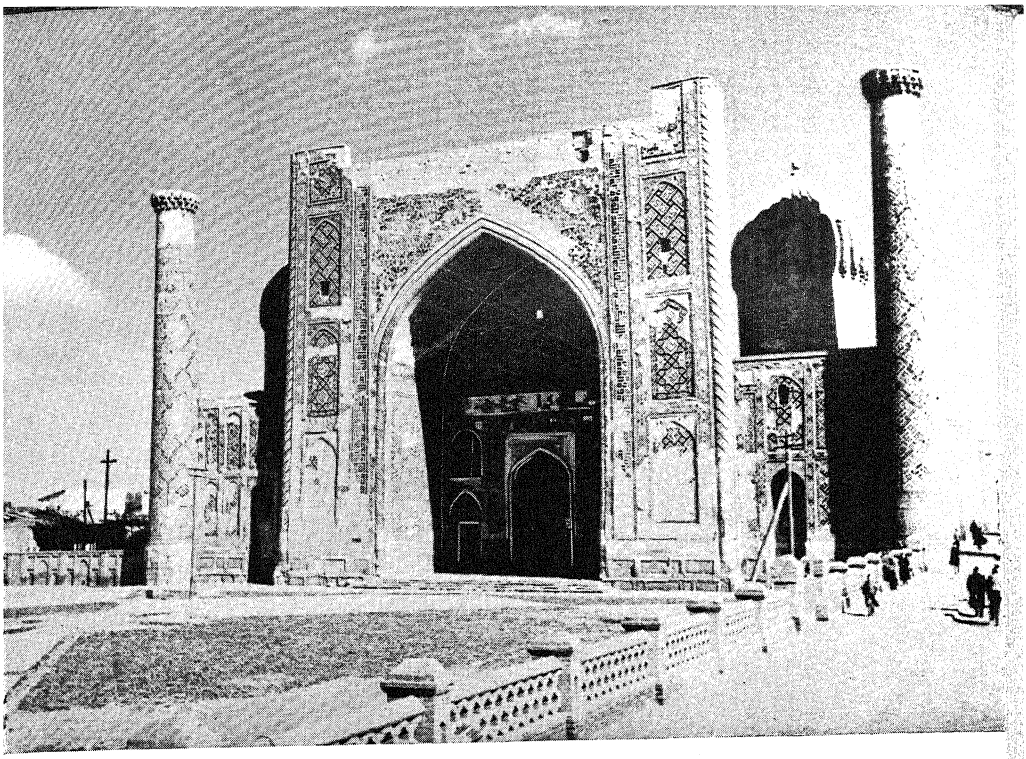
Capital investments during 1946–50 will amount to 1,600 million roubles, including 359 million roubles for works under the Republic's jurisdiction.

Among the enterprises to be put into operation are the following: electric power-stations with a capacity of 33,000 kilowatts, including a steam-turbine electric station with a capacity of 8,000 kilowatts, and small hydro-electric stations with an aggregate capacity of 4,000 kilowatts; a petroleum pipe-line and a superphosphates plant using the phosphorites of Kara-Tau; the second section of the Ashkhabad textile mill and a cement works with a capacity of 50,000 tons.

In the industries under the Republic's jurisdiction the following enterprises are to be put into operation: electric power-stations with a total capacity of 11,700 kilowatts, coal-mines with a capacity of 50,000 tons, 22,000 spindles in the cotton industry, a woollen mill with 4,000 spindles, and a vegetable cannery with a capacity of 2,200,000 standard cans.

Industrial output by enterprises under the Republic's jurisdiction in 1950 is estimated to reach 490 million roubles, of which the output of State industries under local jurisdiction and of industrial co-operatives is to comprise 102 million roubles.

In 1946–50, 495 new oil-well sites are to be prepared for operation, and the industrial resources of natural sulphur in the Gaurdak field are to be increased by 130,000 tons; ozocerite deposits will be surveyed.



The Shir-Dar madrasah, one of the remarkable memorials of 17th century Samarkand architecture.

A street in modern Tashkent. Right, a cinema; left, the public library.

A members' meeting at the " Azad " Collective Farm in Uzbekistan.

Among others the chief items of industrial output in 1950 are scheduled as follows:

Coal (tons)	60,000	Cotton fabrics (metres)	22,000,000
Petroleum (tons)	1,104,000	Woollen fabrics (metres)	820,000
Electric power (kwh.)	150,000,000	Silk fabrics (metres)	825,000
Superphosphates (tons)	50,000	Hosiery (pairs)	3,100,000
Cement (tons)	40,000	Footwear (pairs)	1,470,000
Window glass (sq. m.)	2,000,000	Salt (tons)	160,000
Canned meat (standard cans)	4,000,000		

The crop area in the Turkmenian S.S.R. in 1950 is planned to reach 433,000 hectares, of which 409,000 hectares will be on collective farms; the area sown to grain-crops is scheduled at 158,000 hectares, of which 138,000 hectares will be on collective farms; the area sown to industrial crops is planned at 161,000 hectares, including 145,000 hectares to be sown to cotton; the area to be planted to melons, potatoes and other vegetables is scheduled at 29,000 hectares, of which 18,000 will be on collective farms, and the area sown to fodder crops is planned at 95,000 hectares, of which 92,000 hectares will be on collective farms.

Work on the irrigation of large tracts of land in the basins of the Murghab and Tedzhen Rivers will be completed. The irrigated area is to be increased by 15,000 hectares, and measures will be taken to establish a stable water supply on an area of 20,000 hectares.

Livestock by the end of 1950 are planned as follows: horses, 64,000, including 54,000 on collective farms; cattle, 305,000 head, including 145,000 on collective farms; sheep and goats, 4,330,000, including 2,900,000 on collective farms. Emphasis is being laid on the increased breeding of karakul sheep.

The plan of State-owned housing accommodation in the towns of the Turkmenian S.S.R. to be made available for occupation in the period 1946–50 is fixed at 310,000 square metres.

By 1950 the number of schools is planned to be 1,102, with an attendance of 203,000, and the number of hospital beds is scheduled at 8,000.

CHAPTER XI

THE UZBEK SOVIET SOCIALIST REPUBLIC (UZBEKISTAN)

Our first impression of the Uzbekistan people was a very happy one. We had arrived in Tashkent at about 10.30 p.m., after a long, interesting but very fatiguing air journey from Moscow. By some slip-up (as we learnt later), the hotel at which we were booked to stay had not expected us till the following day, and had consequently not sent a car to the aerodrome to meet us. What were we to do, strangers in a strange town late at night? In our dilemma we told two fellow-passengers—members of the Tashkent Soviet—of our plight. A small car had met them, and by the time we had become convinced that there was no car for us from the hotel, these two members of the Soviet had already put their luggage in their car and were about to drive off home. We hoped that when they reached the town they might perhaps inform the hotel and send a car to pick us up at the aerodrome. What was our surprise when, no sooner had they heard of our situation than, without a moment's hesitation, they told us not to worry, jumped out of their car, and, after a few words to the chauffeur, they removed their own luggage, loaded ours into their car and instructed the chauffeur to drive us to our hotel and to come back for them after he had seen us safely to our destination.

After we had somewhat recovered from our surprise at this quick, unexpected solution of our difficulties, we thanked them very warmly for such unprecedented kindness. But they in their turn were no less surprised at the effect their action had had on us. " But surely," they said, " what else could you expect? You are strangers, foreigners in our country; it is naturally our first duty to look after you," and to our feeble protest at the great inconvenience to which we were putting them, they made a deprecating gesture: " Oh, that's nothing. We shall be home an hour or so later than we might have been. Well, what of it? We are tired? So are you, but we are at home in our own town; you are away from home; it would be worse for you." We could only thank them again for their great kindness, and could not help wondering whether two foreigners arriving in London

and faced with a similar problem would have met with the same treatment and reasoning on the part of two complete strangers, fellow-passengers.

Long before the Tsarist conquest of Central Asia, the Uzbeks (of Turkish origin) were the most numerous and in many ways the most progressive of the nationalities in those areas, and until the Russian conquests they were the ruling race. The Uzbek military aristocracy played the leading role in the formation and government of the three most important Khanates of Central Asia—i.e. Bukhara, Khiva and Kokand. We have dealt with the conquest of these areas by the Tsarist Government in a previous chapter, and need say no more here.

The Uzbekistan Soviet Socialist Republic was formed in 1924 by the unification of the predominantly Uzbek parts of Bukhara with the Uzbek areas of Turkestan and Khorezm, and in May 1925 it was accepted as one of the Constituent Republics of the Soviet Union. It now comprises the regions of Andizhan, Bukhara, Kashka-Darya, Namangan, Samarkand, Surkhan-Darya, Tashkent, Ferghana and Khorezm, as well as the Kara-Kalpak Autonomous Soviet Socialist Republic.

Uzbekistan, with an area of 158,000 square miles and a population in 1939 of 6,282,000, extends in the south-eastern direction from the Aral Sea along the northern foothills and lower slopes of the Tien-Shan and Pamir-Alai Mountains, along the valleys of the great Central Asian rivers—the Amu-Darya, the Syr-Darya and Zeravshan—and includes the extensive semi-desert plains of the Kzyl-Kum (Red Sands). On the south it is bordered by Afghanistan, on the north by the Kazakh Soviet Socialist Republic, on the east by the Kirghiz and the Tadzhik Soviet Socialist Republics and on the west by Turkmenia.

The valleys of the Rivers Ferghana, Syr-Darya, Zeravshan, Amu-Darya and Chirchik, protected from the cold winds by the mountains, are spotted with verdant oases in which the population of Uzbekistan is mainly settled. The country possesses extensive pastures, so large as to provide grazing for millions of head of cattle. It is also rich in coal, oil, sulphur, copper, limestone and phosphorites.

In addition to Uzbeks, who constitute three-quarters of the population, Kara-Kalpaks, Russians, Tadzhiks and Kazakhs inhabit the country.

As part of Russian Turkestan, Uzbekistan was, of course, a Russian colony, regarded by the Tsarist authorities as an area for exploitation and for furnishing raw products for Russian industry. Some 85 per

cent of all Uzbekistan's marketable agricultural produce was forwarded to the central districts of Russia.

Uzbekistan has long been known for its cotton production, but in pre-Soviet days cotton-raising both here and in the other cotton areas was carried on by primitive implements, and there was insufficient irrigation. The Uzbeks then had less than 1,000 steel ploughs. The result was not only extreme poverty and back-breaking toil for the native peasants, but even an insufficiency of cotton for the Russian industries. Tsarist Russia was a considerable importer of raw cotton from abroad.

The coming of the Soviets changed all this. The formation of collective farms and the development of irrigation—of which we shall have more to say below—and the establishment of industries have literally changed the face of the country. The work carried out in accordance with the First and Second Five-Year Plans (1928–32 and 1933–37) gave very substantial results. By the beginning of 1938 the total cultivated area increased from 2,166,200 hectares in 1913 to 2,832,300 hectares, and the area under cotton alone increased from 423,500 hectares in 1913 to 917,200 in 1938. By the beginning of 1948 some 98·8 per cent of Uzbek peasant households had united in collective farms. In 1949 over 200 machine and tractor stations were servicing the collective farms of Uzbekistan, and cultivating about 93 per cent of their land. Cotton-planting was mechanised on 70·9 per cent of the plantations, while 64·9 per cent of the land was harrowed by machines.

The soil and climate of Uzbekistan are particularly favourable for cotton cultivation, but this does not signify that science has nothing to add—on the contrary, the application of modern scientific methods has resulted in raising Uzbek cotton-harvest yields to the first place in the world. Before the Revolution the highest yield (indeed exceptional) per hectare (2·7 acres) was 25 double centners. In 1947 some collective farmers obtained over 100 double centners per hectare. Over 60 per cent of the cotton supplies of the U.S.S.R. comes from Uzbekistan.

We had a good illustration of the attention paid by the Soviet authorities to the application of science in cotton-raising when we visited the central cotton-selection station and the central agro-technical experimental station, which forms a self-contained part of the Cotton-Selection Station situated near Tashkent.

This Institution is concerned chiefly with improving cotton culture,

Lucerne, which alternates at regular periods with cotton-growing, is also studied here. Lucerne is a very important fodder, and its rotational cultivation on the cotton-fields considerably increases the cotton harvest. In the various departments, laboratories and experimental fields of this cotton station, close study is made of native varieties of Egyptian, American, Indian and other cotton-plants, the results of grafting one on the other, and the effect of sun and moisture and of fertilisers, etc. It may be remarked that before the Revolution and during the first years following it only the native Asiatic sorts of cotton were grown. We were shown some fine results achieved in improving cotton-plants, both as to yield and quality.

In one of the laboratories Uzbek scientists were making a close study of the causes of disease, particularly of wilt, in the cotton-plant. But the establishment of the causes did not necessarily mean finding the cure; they therefore set themselves the problem of evolving such varieties as could resist the disease. Finally, a number of new varieties of cotton, which have a harvest yield, rate of ripening and resistance to diseases much superior to all other varieties, were evolved.

Uzbek cotton selectionists have developed varieties of long-staple cotton which never suffer from wilt, and ripen much more rapidly than the most quick-ripening varieties of Egyptian cotton. A new variety has also been evolved which is immune to Hommo's disease. Recently new varieties of long-staple cotton have been developed, in which the bolls grow not on the branches, as usual, but on the stalks, which allows the planting of five or six times more cotton per hectare than usual. Some of the new varieties of cotton are extremely cold-resisting, and can be planted far beyond the northern boundary of its native surroundings. These hardy plants withstand the sudden spring frosts which so often kill young cotton-shoots of other varieties.

Among the specimens we saw a number of soft and hard cottons. The latter, when spun, was very wool-like, and when mixed with wool gave a good, hard-wearing cloth.

According to recent reports, new Soviet-designed cotton-picking machines, each of which replace forty hand-pickers, are being used on the Uzbekistan cotton-fields. They are said to be superior in many respects to the best American cotton-picking machines. In addition a new system of cotton-planting and cultivation which makes mechanical cotton-picking easier is being introduced.

During the ripening of the cotton bolls the plants are dusted with a

special substance which causes the leaves to drop off and simultaneously speeds up the ripening of the bolls.

In one department we inspected a number of samples of natural coloured cottons and of materials woven therefrom. The study of these is still very young, but research on the subject is being pushed along vigorously. The plantations of coloured cotton in Uzbekistan have been greatly extended during the last few years. In 1947 they covered some 18,500 acres. The cottons obtained are of light and dark brown, green and other colours. These cottons ripen early, are disease-resisting and the harvest yields are as good as that of the common white varieties. In addition, fabrics made of the naturally coloured cottons are very durable and the colours are fast to sun and water.

In the library of the Station we saw numerous foreign journals and books. Bearing in mind that it is sometimes said in Britain that Soviet scientists are prevented by the authorities from obtaining foreign scientific literature, we asked them whether they had difficulty in getting foreign books and journals. The reply was:

"None from this side, but during the war we could not get many foreign books or journals. Now we are again receiving foreign journals."

Most of the specialists were young or early middle-aged Uzbeks; among them were a fair number of native young women.

Cotton-cultivation and agriculture generally cannot be carried on in Uzbekistan without irrigation, and it is interesting to note that during the whole of the Tsarist period, when native and Tsarist feudal lords owned both the land and the water, only some 80,000 hectares of land had been irrigated.

The building of irrigation canals proceeded rapidly, particularly during the second Five-Year Plan and subsequent years. By 1938 about 1,480,000 out of the total of over 2,800,000 hectares of cultivated land were under irrigation. The members of the Kolkhozy of Uzbekistan and the other Central Asian Republics fully realised the great importance of irrigation to their well-being, and they threw themselves with a will into furthering the construction of a number of most important irrigation canals. Among these are the Stalin Great-Ferghana Canal, 270 kilometres long, the Mikoyan Northern Ferghana Canal, 165 kilometres long, the Andreev Southern Ferghana Canal (108 kilometres), the Molotov Tashkent Canal (63 kilometres), the Northern Tashkent Canal and many others—most of these were built

at record speeds. Some 160,000 Kolkhoz members (of Uzbekistan and Tadzhikistan), for instance, participated in the building of the Stalin Great Ferghana Canal, and the digging of the canal was completed in forty-five days, some 18 million cubic metres of earth being excavated.

At the end of 1947, in the Hungry Steppes, the construction of the first section of the Southern Golodnensk Canal—one of the largest irrigation constructions in Uzbekistan—started. By the spring of 1949 some 20,000 hectares of desert land were irrigated. Here collective farmers will cultivate wheat and cotton on former waste land.

In 1947 thousands of Kolkhoz members were engaged in building the Katta-Kurgan reservoir, calculated to improve the water supply of the Samarkand, Bukhara and Namangan regions over an area of more than 500,000 hectares. A start was also made in that year in building a 500-kilometre canal on the Amu-Darya River, which will bring water from this river across the desert to the Zeravshan-Bukhara valley and the Kashka-Darya region. In general, the Uzbeks are turning more and more to the Amu-Darya, since they have been making nearly maximum use of the water resources of the Syr-Darya during the past ten years. The new reservoirs will help solve the problem of supplying water to the Zeravshan Valley, famed for its vineyards and cotton of the best varieties grown in the U.S.S.R.

Launched in 1940, the construction of the Katta-Kurgan reservoir was interrupted by the war. In 1946 it had a volume of 100 million cubic metres, which was increased to 300 million in 1947. Beginning with 1948, some 500 million cubic metres of water will collect in it every spring.

An illustration of the initiative of the members of the Uzbek Kolkhozy may be seen in the neighbourhood of the Zeravshan River, which is the only source for the irrigation of the Kolkhoz fields in that district. The Kolkhozy situated along the lower reaches of the river suffer an acute shortage of water when the water of the river is used for the cotton plantations. At other periods the water from the river overflows the irrigation canals and ruins thousands of acres of fields and orchards.

At the end of 1947 about 45,000 Kolhoz members undertook the construction of two canals—the Verkhno-Bukhara and the South Bukhara, of a total length of about twelve miles. The work was completed in twenty-five days.

The Verkhno-Bukhara Canal will fill the huge Kuya-Mazar ravine

with the excess water of the Zeravshan, converting it into a reservoir with a capacity of 350–400 million cubic metres, and the South Bukhara Canal will conduct the water from this reservoir to the cotton-fields of the Sverdlovsk, Karakul and Alat regions. The irrigation of some 60,000 hectares of land will be greatly improved by the new canals.

We visited several cotton-growing Kolkhozy in Uzbekistan. One of these—the Kaganovich Kolhoz near Tashkent—covers an area of about 500 hectares (about 1,200 acres). It was started in 1938, and a large proportion of the workers in the fields were formerly nomads. The total population of the Kolkhoz when we visited it was 875, of whom 325 worked on the farms. In addition to cotton, the Kolkhoz also raised silk, cattle, fruit and vegetables. We drove around the huge cotton-fields, which seemed to extend across the limitless distance as far as the eye could see. At the time of our visit some of the cotton had already been picked, and, the day being Sunday, there were very few workers in the fields. The Chairman of the Kolkhoz, Mr. Kramrazulov, a tall Uzbek wearing a number of medals, explained to us their system of alternate cultivation of cotton and lucerne and the cycle of growth of the cotton-bolls. In the height of the harvesting season the latter is gathered by machinery, at other times by hand. He also told us of the great amount of irrigation work being carried out in the Republic, in which a number of his own Kolkhoz members participated.

" But how about the work in the Kolkhoz when your members are away on irrigation construction? " we asked.

" Oh, we arrange that," he said. " In the first place, for the most part our members leave for the irrigation sites and, for that matter, also for work on railways and hydro-electrical constructions in the more slack seasons; secondly, we all recognise the immense importance of irrigation, electricity and railways to our own well-being, and those of us who do not participate in these constructions gladly put in some extra work to make up for the volunteers; we on our side help their families when that is necessary with their own household gardens (these are usually round about one-half to three-quarters of an acre) and in other ways."

" And what about their participation in the division of your produce and earnings? "

" They lose nothing; they and their families get their fair share, just as though they had been working on the Kolkhoz farms."

He then took us to his own home—an unpretentious but clean, comfortable, one-storey house. Sanitation was, of course, very primitive, but spotlessly clean. The house was situated in a garden surrounded by fields as far as the eye could see. In the garden were a number of verandas, decorated with gaily-coloured rugs on the floor, and in each veranda there were two beds. The central veranda was at the end of an avenue, on either side of which hung huge branches of luscious grapes. Here we found a table laden with all sorts of native foods—pies, sausage, bread and cakes, fried pelmets, fruit, almonds and sweets, wine and cognac. After we had partaken of these, they brought along basins of soup and delicious boiled pelmets with sour cream. Tea, very weak, but with a nice aroma, was served all the time. Just as we thought the eating was over (and the things were so nice that we had eaten more than was strictly good for us), a huge dish of rice cooked native fashion—the native dish—was placed on the table. We had to partake of it, but although it was really extremely tasty, we found it difficult to eat any more.

After all this we were only too pleased to accept the offer of our host to lie down for a rest on one of the veranda beds.

Our host, helped by his wife and daughter, himself served the meal, but the two latter did not sit down with us at table. When we asked why, we were told they were too shy. It was something that they no longer wore the *purdah* (veil), but to expect them to sit down with strangers was asking too much.

Having taken an hour's rest, we got up refreshed, but, to our dismay, the table was at once relaid with melons, apples, peaches, grapes, cakes, sweets and cognac, and tea was again served. The latter was quite welcome, but as for eating any more, how could we? Over tea the Chairman related his biography. He was born in 1892, the son of a poor day-labourer. He himself worked for the local landowner at a wage of about sixteen roubles a year from the age of twelve to fifteen. The following three years he worked as a labourer in an orchard. Subsequently he took a job as groom for a merchant, and in 1918 he again worked in an orchard, where his wage was six roubles a month. He fought as a partisan in the Civil War against the Basmachi bandits, and in 1924 was elected a member of the village Soviet. In 1925–28 he was a member of the Land Distribution Committee; later he was appointed manager of a Sovkhoz. In 1935 he worked on an irrigation project, and in 1938 became Chairman of the Kaganovich Kolkhoz. He had also been elected a member of the Supreme Soviet.

"What," we asked, "had become of the former owners of the land?"

"Some," he replied, "had been killed during the fighting, others had fled the U.S.S.R., but some of the younger people had settled down to honest labour. The son of my former master, for instance, is now a member of this Kolhkoz, and works quite well, too."

Much of what we heard and saw at this Kolkhoz we also heard, with variations, at many other Kolkhozy.

Later we called at the houses of some of the rank-and-file members of the Kolkhozy. These were small houses built of native stone and clay substance. They were one-storied, and contained one or two, sometimes three, rooms and a small kitchen. They were very clean —each room contained a bed with gaily embroidered cover and heaps of cushions. The walls were hung and the floor covered with bright rugs of many colours—these had been woven (or embroidered) by the womenfolk. The menfolk were away when we called. The mistress of one of the houses at which we called was an old former nomad woman. She told us that she had had fifteen children, but only three had lived to grow up. She was a widow. She showed us the decorations won during the war by her son and one of her daughters. She then brought in a huge tray laden with fruit, sweets, cakes and nuts, and after we had sat down on the rugs on the floor, native fashion, she served tea. When she saw that we could not eat much, she pressed us to take back with us some of the nuts and sweets.

This process of serving tea and other refreshments was repeated in each of the houses we visited. We did our best not to offend the kind hostesses, but at last, after the sixth house, we just could not touch another particle of food, and at the risk of offending the last hostess—a very beautiful, shy young woman—we rebelled and refused all food. We hope she did not feel too sore; she certainly did look disappointed.

Although Uzbekistan accounts for nearly 65 per cent of the total raw cotton raised in the U.S.S.R., the Republic also raises wheat, barley, rice, maize and other grains and fodder and vegetables and sugar-beet, and is particularly noted for her silk and orchards. Uzbekistan now produces about three times the number of silk cocoons produced in 1913, and provides over one-half of the total silk cocoons produced in the U.S.S.R. She forwards to the rest of the country dried fruit, such as raisins, sultanas and apricots, canned fruit, vegetables and wine. In the southern valleys almonds, figs and pomegranates are grown.

Eighty-six varieties of pomegranates, fifty kinds of figs and scores

of varieties of sweet potatoes, sugar-cane and many other tropical crops are grown at the South Uzbek zonal station of the U.S.S.R. attached to the Institute of Arid Sub-Tropics, near the village of Denau, in the Surkhan-Darya Valley.

Wherever one goes in Uzbekistan, and whomever one visits, invariably one is treated to beautiful bunches of all sorts of grapes. We visited some of their vineyards—one in particular, where they raise seventy-three kinds of grapes—and we were informed that some of the neighbouring vineyards raised even a larger number. The vineyard we visited had avenues over a mile long, bordered on both sides by vines, on which hung the most luscious and largest clusters of grapes we had ever seen. One bunch which the manager cut off for us weighed over 20 lb. This manager was a tall, spare, bronzed, elderly Uzbek, a former poor peasant day-labourer, whom everyone treated with great respect because of the wonderful work he had done in improving grape cultivation both in respect to quantity and quality and in evolving new varieties. He could speak very little Russian, but his son—a tall, slim, young Red Army officer—spoke fluent Russian and Uzbek, whilst the grandson, a sturdy little chap of eight, also spoke both languages, and when we suggested to the child that he might become a Minister in the Uzbek Republic, he said, " No, I don't want to; I want to grow lots of grapes like grand-dad, and I shall grow even bigger and better ones."

At this vineyard they also made wine and dried fruits.

Selectionists of the Uzbek Rice Experimental Station have produced many varieties of rice of high yield and quick-ripening qualities; one sort, which ripens within eighty or ninety days instead of the 135 or 140 usual for Uzbekistan, is said to have particularly promising prospects, and can be sown a second time immediately after the early crops have been harvested.

For areas short of water the selectionists have produced several sorts of rice growing on dry ground which require only half as much water as the usual sorts. In 1949 the experimental station grew and harvested two crops of rice on the same dry ground.

New tractor-drawn potato-digging machines have been used for the first time on some collective farms of Uzbekistan. This machine was designed by workers of the Ministry of Agriculture of the Uzbek Republic. It can lift the potatoes from twenty or twenty-five acres per day. It can also lift carrots, beetroots and other root vegetables. Production of these machines is not complicated.

Livestock breeding is an important item in the economy of Uzbekistan, and in 1944 the herds were estimated at over 6 million head. The country breeds horses, cattle, sheep—both for mutton and karakul sheep—goats and camels. Kara-Kalpakia is the largest karakul-sheep-producing region in the U.S.S.R.

Recently an expedition organised by the Central Asian State University made a comprehensive study of the southern section of the Ust-Urt Plateau, between the Caspian and Aral Seas, hitherto a 160,000 square kilometre stretch of practically unknown tableland. All information so far about the nature of this area was confined to its northern section, which Kazakh livestock breeders had used for pasturing beef cattle since olden times.

After travelling some 6,000 kilometres on camel and on foot, and spending about two and a half years in the region, the expedition established that the vegetation growing in the Kara-Kalpak section of the plateau can provide fodder for millions of head of sheep, which will make it possible to build up the region into a new karakul-breeding centre.

The first experimental winter pasture-grounds for several thousand sheep, covering an area of some 250,000 acres, were in 1947 being laid out in the middle of the plateau. Functioning here will be an experimental station of the All-Union Karakul Breeding Research Institute, a meteorological station and an air-field.

Later on it is planned to set up large karakul-breeding State farms, and settlements and livestock farms will be formed around the wells and other watering-places.

Construction of the first section of the Khorezm railway line, linking Chardzhou–Alexandrov–Gai, was begun towards the end of 1947. The new line will promote the tapping of the rich reserves of salts, building materials and many other minerals of the Ust-Urt Plateau.

Rich deposits of potassium salts have recently been discovered in the Baisun Mountains of southern Uzbekistan. They extend over an area of about 2,300 square miles.

Industrially Uzbekistan in Tsarist times was even more primitive and backward than agriculturally. There were no modern textile or other industries—such industries as it did have were for the most part of a handicraft nature. In accordance with the Soviet policy of industrial development for all the hitherto backward areas, all this was changed radically as a result particularly of the Five-Year Plans, and by 1938 the gross industrial output of the Republic was six times that in

1913. Closely linked both with the progress of industry and agriculture is the growing use of electricity and the building of electrical and, in Uzbekistan particularly, hydro-electrical power-stations. The output of electricity rose from 25·5 million kilowatt hours in 1932 to 57 million kilowatt hours in 1937.

The total power of the electrical stations in 1913 was 3,000 kilowatts; by 1932 it had risen to 27,500 kilowatts; by 1937 to 80,000 kilowatts; by 1947 the total power of the Uzbekistan electrical stations was more than a hundred times greater than in 1913 and the output of electricity about 400 times that in 1913. Numerous small stations with a power of 30–60 kilowatts have been built for the special use of the Kolkhozy. Of larger hydro-electrical stations one might mention that ten stations have been built on the River Chirchik, six of which were put into operation during the second World War.

The building of power-stations has proceeded on a still larger scale since the end of the war. Particularly big projects are now being carried through on the Rivers Chirchik and Boz-Su, in the Tashkent district. When complete, the Chirchik–Boz–Su system will be one of the biggest hydro-electric schemes in the world for its number of power-stations.

Hydro-electrical stations have also been and are being erected on other of Uzbekistan's large rivers. Of these, the most important is the Farkhad hydro-electric station, which was begun during the second World War in 1943 and started to operate in February 1948. The station (which is linked with an irrigation project for the Hungry Steppe) on the Syr-Darya River is named after a Central Asian legendary hero—Farkhad. The story is that once there was a lovely girl named Sherin, with whom Farkhad was in love. But Sherin was as good and tender-hearted as she was beautiful, and although she loved Farkhad dearly, she refused to marry him because she was too unhappy—she felt she could not seek bliss for herself while all around her the people suffered dire poverty because they could not get water to make their fields fruitful. Farkhad's love was deep, and he determined to win Sherin as his bride by diverting the waters of the Syr-Darya into the parched earth of the Hungry Steppes. He toiled valiantly, but came to a tragic end in his attempt.

The story illustrates the water-hunger of the Uzbek people, and their despair in the days gone by of ever assuaging it adequately. But these days are past.

This power-station, one of the largest in the Soviet Union, has

been erected at the approaches to the Golodny Steppe (Hungry Steppe) on the Syr-Darya River: a 1,148-foot dam has been erected, and the largest derivation canal in the Soviet Union has been dug. The site of the station is just below the rock where, the story says, Farkhad tried to dam the river. When it is operating at full capacity it will set in motion thousands of new machines in Uzbek factories, and electrically-powered tractors and threshing-machines on the collective-farm fields of the Republic.

The new hydro-electric station will greatly extend the supply of power to industry, as well as increasing the power supply of the Uzbek town and countryside. Incidentally, already in 1947 the Uzbek countryside was getting more power than all the rural areas in pre-revolutionary Russia taken together.

Among the towns developing in the district may be mentioned Begovat, where formerly camel caravans stopped to fill up with water before crossing the Hungry Steppe. At that time there was nothing there but a handful of clay huts and a primitive inn. Today it is a large-sized town of factories and white houses set in gardens.

Here is located the first large-scale steel-smelting works built in Central Asia, and set in operation in 1944, and the town is becoming famous for its metallurgical products and power output.

It is estimated that some 1,625,000 additional acres of desert land will be irrigated.

The Farkhad development, like all other irrigation, road-building and power projects in this area undertaken by the joint efforts of the population, attracted large numbers of volunteer workers from the collective farms, who are vitally concerned in expediting the work. Sixty thousand volunteers came to the construction site from all parts of Uzbekistan.

The Farkhad power-station is equipped with the most up-to-date machinery. It is a gigantic automatically working installation.

As regards other irrigation and hydro-electrical projects, a member of the Technical Council of the Ministry of Agriculture of the U.S.S.R. made the following interesting statement:

" Simultaneously with the launching of work on the left bank of the Amu-Darya River on a 600-kilometre irrigation canal intended to water the Kara-Kum Desert in Turkmenia, an expedition of the Uzbek Academy of Sciences is now (May 1947) surveying the route of a still greater irrigation canal on the opposite side of the river. The

projected canal will be about 800 kilometres in length, and will irrigate 1,200,000 hectares (about 3,000,000 acres) in Uzbekistan. One of the greatest irrigation undertakings planned by Uzbekistan, it will be of enormous economic significance to this leading cotton-producer of the Soviet Union.

" The Amu-Darya River is fed by four large streams rising in the Pamirs, and throughout its length, from Termez to the Aral Sea, it flows through flat, sun-scorched desert country. A swift river, it carries an average of 2,000 cubic metres of water per second, and during the June and July peak as much as 4,000 cubic metres. It is a capricious stream, constantly shifting its channel, washing away its soft, sandy banks and sweeping down to the Aral Sea so heavily laden with silt that its water is of the deep brown colour of cocoa. So far only enough of Amu-Darya water is intercepted and re-routed into the surrounding country to irrigate some 800,000 hectares, whereas potentially the river could turn more than four million hectares of sun-parched soil into fertile farmlands. Nor is the enormous power latent in the great river properly tapped; the 10,000 kilowatts which the Amu-Darya now grinds out amount to less than 1 per cent of the total capacity, which is estimated to be in the neighbourhood of 1,600,000 kilowatts.

" Uzbekistan's present leading cotton areas lie adjacent to another great Central Asian river, the Syr-Darya, but this river's water resources are almost completely utilised, and the opportunities for further expanding cotton-growing in these parts are limited. In the Amu-Darya, Zeravshan and Kashka-Darya valleys, however, there are huge tracts of suitable land, provided the irrigation networks are extended to them. The Zeravshan and Kashka-Darya are already completely used for irrigation—so much so that neither of these tributaries of the Amu-Darya reaches the parent stream any more. This leaves Amu-Darya the main source of water for further irrigation.

" The present project is aimed at re-routing Amu-Darya water into the Zeravshan and Kashka-Darya valleys. The former (the word ' Zeravshan ' means ' Scattered Gold ' and indeed its basin is golden country for cotton-growing, moreover the finest varieties of the crop) has about two million hectares of irrigable land, while so far there is barely sufficient water to irrigate the 400,000 hectares already under cultivation. Of the one million hectares of fertile land in the Kashka-Darya valley, only 160,000 are irrigated at present.

" Besides irrigation the project calls for the construction of hydro-

electric power-stations. The plan calls for setting up capacities able to generate about 1,000,000 kilowatts to help tap the deposits of oil, coal, sulphur, iron ore, bauxites, potassium salts, etc., discovered in these parts.

"The preliminary plan envisages the construction of a dam 6 kilometres long and 20 metres high at Kelif, where the Amu-Darya flows through a narrow gap in the Bash-Khurd range. This will divert the river into a canal, the first 100 kilometres of which will run parallel to the foothills of the Ghissar range. A hydro-electric power-plant is to be built at Mt. Ak-Jar, where the canal will drop 34 metres.

"Beyond this point the canal is to swing northward to cross the desert tracts between the Amu-Darya and the Kashka-Darya oasis. The lower Kashka-Darya basin will be irrigated directly from the main canal, which will have powerful pumping-stations operated by electricity obtained from the irrigation project's own power-stations. Out of the 1,200,000 hectares scheduled to be opened up by the canal, 400,000 will be watered through feeder canals fed by the pumping-stations.

"At its 475-kilometre mark the canal will cross the Zeravshan River, augmenting the stream's water supply, and then pass into the boundless expanses of the Kzyl-Kum plains, where a large area is to be opened up for cotton cultivation.

"The Turkmenian canal now building and the projected Uzbek canal will together drain something like 1,900 cubic metres of water from the Amu-Darya in the July–August period, cutting the water level by half in these months. To prevent this from having a detrimental effect on the lower reaches of the Amu-Darya, where agriculture is being conducted on an irrigated area of more than half a million hectares, three huge water reservoirs are to be built in this section.

"The projected reservoirs are scheduled to accumulate a total of 6,000 million cubic metres of water in seasons when it will not be needed for the fields. The stored-up water is to be used to keep up the level of the lower Amu-Darya sufficiently high in the summer months.

"It has been estimated that the Amu-Darya dam and canal will involve the excavation of more than 500 million cubic metres of earth and the pouring of 3,800,000 cubic metres of concrete, and require 47,800 tons of metal sections. The cost is estimated at about 7,000 million roubles."[1]

[1] *Moscow News*, May 23, 1947.

Although Uzbekistan has always been famed for its cotton, it had no textile factories of its own. Most of its raw cotton was sent to Ivanovo—the Soviet Manchester—to be converted into yarn and cloth. Now Uzbekistan has its own cotton-mills, built during the pre-war Five-Year Plans. One of these we visited was set in operation in 1934, and was considerably extended during the second World War. It is equipped mainly with Soviet machinery. In 1946 it employed some 15,000 workers, of whom about 83 to 85 per cent were women, and had a daily output of 250,000 metres of cloth. It also produces thread and has dyeing and printing departments. The factory has its own designing department and, judging by the sketches and the etched designs, there were some very talented young people among the artists whom we saw at work.

The factory is surrounded by a park with flower-beds. It has medical stations in the various departments similar to those usually found in Soviet factories. It also has its own crèche, kindergarten and club, complete with theatre. Houses for the workers were built at the same time as the factory was erected.

As in the rest of the U.S.S.R., much attention is paid to maternal and infant welfare, and crèches are provided for young children whose mothers go out to work. We visited some of these institutions, which are scrupulously clean and pretty well equipped, but one maternity home we visited in Tashkent we found very cramped for space—the beds, for instance, were much too close to one another. We mentioned this, and those in charge agreed, but "What are we to do?" they asked. "We are constantly increasing our accommodation, but we cannot keep up with the rising birth rate." And the war had, of course, made matters worse.

Before going into the wards we had to don white overalls, and before entering the babies' rooms we were also fitted with gauze mouth-guards. The babies were dear little things, mostly sound asleep, although one was crying lustily—he had good lungs, that youngster. They were wrapped from shoulders to feet, and nothing was to be seen except their heads. The doctor was a young, bright, Uzbek woman, and the matron was also Uzbek. The mothers, we were told, were only kept in the home a week after confinement, and providing everything was normal, they were then transferred to their own homes, but remained under the doctor's supervision for some time after.

They also informed us that relatives were not permitted to visit the

home. " We have so little room," said the doctor; " and actually it is not even advisable, for visitors might bring germs with them." She also told us that there had been no deaths for a long time during confinement at this home, and practically none at other maternity homes in the neighbourhood.

We also visited the crèche attached to the textile factory. Here a middle-aged woman who looked as though she might have belonged to the former aristocracy was in charge, and a younger woman was principal doctor.

The children were clean and bright, and obviously very interested in us, but very shy. The young babies who require nursing are not brought to the mother, as we saw in other parts of the U.S.S.R., but the mothers were brought from the factory to the crèche twice a day to feed their babies. This the matron, doctor and factory manager all agreed was much better for both mother and child. The mother collects the baby or older child at the end of the day when she has finished work, but should it be more convenient for the mother, the child may remain in the crèche during the night, too. There is a small charge—about eight roubles a month—but in some cases the service is quite free of charge.

But textiles are by no means the only industrial products of which Uzbekistan can boast. Since the Soviet Revolution, Uzbekistan has built up a metallurgical industry, numerous machine-building works and chemical plants. It now produces coal, oil, bauxite and rare metals. In 1947 its industrial enterprises turned out enough products to fill 100,000 freight-cars a year, supplying the Republic's own needs and leaving a substantial margin for forwarding to other Republics.

Geological research, by no means complete yet, has already proved that Uzbekistan has vast mineral resources, including oil, coal, nickel, bismuth, manganese, ozocerite, bauxites, corundum, iron and the richest deposits of sulphur in the U.S.S.R.

Tashkent has a huge agricultural machinery plant which supplies ploughs, drills and cultivators to practically the whole of Central Asia. In addition, there are a large number of other factories of all kinds on the outskirts of Tashkent, so situated as not to disfigure the town—and it would indeed have been a thousand pities had the industries of the Republic spoilt this fine town. New enterprises in the course of building are also situated on the outskirts.

Tashkent, the capital of Uzbekistan, was the first of the Central Asian cities to adopt the Soviet system, and modern industrial enter-

prises were built here before they made their appearance in any other Central Asian town. It was in Tashkent, too, that the first Central Asian State University and other higher schools, as well as the first Central Asian branch of the Academy of Sciences, were opened. It was the first town in which women discarded the *purdah*, thus demonstrating their determination to claim and assume equal status with their menfolk. This undoubtedly required some courage.

An elderly Uzbek told us the following incident, which he himself had witnessed in 1916. The Tsarist authorities were conducting a recruiting drive for war work (not in the armed forces, of course) among the young men; the population was silently hostile, but one woman, beside herself with fear that her sons would be taken, in a moment of passion tore off her *purdah* and shouted, "We shall not give our sons!" The Uzbeks were so horrified at this sacrilege of a woman daring to show her face in the street that they threw themselves on her and slashed her face again and again.

Prior to the Soviet Revolution, Tashkent had a few small factories and many handicraft shops with primitive equipment, almost exclusively employing hand labour. It was then one of the backward cities in the country. Side by side with the old Eastern quarters of the city, the Tsarist authorities built a fort, and residential blocks and public buildings were erected for official use. But while the city centre was improved and modernised, little grey huts huddled closely together on the outskirts. The city had no water-mains, and was supplied only by open street *aryks* (canals). Only a few of the thoroughfares were paved—with cobblestones—while the street-lighting system was confined to kerosene lamps, which were few and far between.

Now Tashkent has become one of the largest and most beautiful cities of the Soviet Union. In 1939 it had 585,000 inhabitants—the eighth city in the U.S.S.R. in point of size. It has huge factories and mills, among which stand out such giants as the textile mill and the agricultural machinery plant, which serves the cotton-growing regions of all Central Asia. Even before the second World War the value of Tashkent's industrial output amounted to almost 500 million roubles annually, and the number of its workers engaged in industry exceeded 40,000, almost twenty times more than before Soviet rule.

Water-mains and electricity have been introduced, many streets have been replanned and paved, and a system of straight main arteries has been developed with squares and parks, lined by modern buildings,

theatres, cinema houses, clubs, educational establishments and industrial enterprises. The city is rich in greenery. Its squares, parks and green-decked boulevards occupy over 150 hectares.

When we visited Tashkent the old town had by no means all been modernised. The streets there were still narrow and crooked, with many ancient buildings, and small clay huts did duty as homes; there were also colourful open-air bazaars. Many of the men and women wore the bright native gowns, with girdles, and the multi-coloured Asiatic skull-caps, but remarkably few of the women wore *purdahs*—during our numerous walks and rides through Tashkent we did not count more than about thirty-five, and these, to judge by their gait, must have been elderly women. There were a number of motor-cars and lorries, but camels, donkeys and horses also wended their way through the principal streets and outskirts of the old town. But we saw very few beggars, and none with the almost traditional sores of which travellers tell in the old days. There was also, both here and in the old parts of other Asiatic towns, one characteristic feature which cannot but strike the traveller: the fine school buildings erected in the still-narrow, crooked streets amidst the old houses.

To encourage the parents to send their children to school, it was essential to have the latter near their homes; moreover, the lofty, airy school buildings were themselves an educative influence for those who had never seen anything for the use of the people other than their ancient clay huts and mosques. A good start has been made in replacing the old huts by modern dwellings. This, as well as the asphalting of roads and the planting of fruit and other trees and bushes, was being pushed particularly in 1947, in order that Tashkent might meet the thirtieth anniversary of the Soviet Revolution in festive garb. We shall have more to say about the schools and other educational establishments, theatres, etc., later.

The modern section of the town has wide boulevards lined with trees. Some of the roads have already been asphalted—the process was discontinued during the war, but has since recommenced. It has handsome buildings, educational, cultural, official, as well as blocks of dwellings. There are some delightful parks and fine gardens, and generally speaking the whole town is like a garden city.

Among the other industrial centres of Uzbekistan are Chirchik, formerly a tiny village, now known for its chemical, machine-construction and power industries; Yangi-yul, for the food and light industries.

On the banks of the River Angren rich coal deposits were discovered shortly before the outbreak of the second World War; they are being developed rapidly. A railway between Angren and Tashkent has been built. During the last few years much work has been done in mechanising the pits. Angren is now spoken of as the stokehold of Uzbekistan. Early in 1948 a gasworks was under construction at the Angren coalfield, whence the gas will be delivered to Tashkent along a 100-mile pipe-line. Gas supplies will be installed in factories and dwelling-houses of the city, as well as in district centres and villages in the vicinity of the gas pipe-line. Large deposits of coal have also been discovered in the Ghissar Mountains, on the territories of the Kashka-Darya and Surkhan-Darya regions. These deposits, it is said, may eventually rival the Angren Coal-basin.

New workers' settlements have been established around the developing oil-fields of southern Alamyshik. Although the Ferghana Valley is known for its orchards, greenery and silk, it also produces hundreds of thousands of tons of oil; the output in Uzbekistan increased from 46,300 tons in 1932 to 365,000 in 1937, and in 1946 it was sixty-seven times that in 1913. Beyond the oil-fields are mercury mines.

Kokand is known for its superphosphate plants. Margelan (in the Ferghana Region) silk has long been famous, and the silk combine of that town is said to be the largest of its kind in the world. All the processes, from the unwinding of the cocoon to the weaving of high-class silk material, are carried out at the Margelan combine. Some thousands of workers (men and women) are employed, among whom are many noted Stakhanovites, and the combine systematically overfulfils its plans.

In the autumn of 1947 the construction of a 615-kilometre railway —Chardzhou–Kungrad—was started. Some 70,000 Uzbeks and Turkmenians volunteered to help in this project. This railway is to pass through difficult mountainous and rocky country, but with the enthusiastic help of the volunteers all difficulties are being overcome. The railway connects the Kara-Kalpak Autonomous Republic and the Khorezm region of Uzbekistan with the Tashauz region of Turkmenia.

The executive offices of the construction were housed in trains drawn up on sidings at the stations of Chardzhou. Dining-rooms, dormitories, stores, medical stations, post offices and radio stations were set up at three-kilometre intervals along the route of the future

line. Troupes of actors toured the site and entertained the builders. Work proceeded simultaneously on all sections of the line.

A key problem here was water. A great deal of drinking-water was needed, not to speak of water for cooking, washing and laundering, as well as for technical purposes. The Amu-Darya is, indeed, only some 20 kilometres (about 12 miles) from the route of the line at some points, but when the water has to be delivered in barrels and tanks, and not by mains, this is a considerable distance. Wells have been sunk, but water still had also to be delivered by tank-trucks, and numerous camels were being employed as water-carriers.

One might go on reciting endlessly the many achievements of Uzbekistan industry—suffice it to say that Uzbekistan has been converted from a purely agricultural to an agricultural-industrial Republic, and Uzbekistan's industry completed the 1947 programme with a surplus of 3·5 per cent. The Republic's aggregate output was 23·8 per cent more than in 1946 and 25·7 per cent more than in 1940. Steel output in Uzbekistan was doubled in 1947, coal output increased 62·1 per cent, and production of textiles rose by 33·7 per cent.

Altogether, during the pre-war Five-Year Plans some 515 various industrial enterprises were built, and another 280 factories and mills were set in operation during the war.

Uzbekistan has many ancient towns—we can only stop here to describe one—the far-famed town of Samarkand. Samarkand was built on the site of Maracanda, the capital of the Moslem Samanid dynasty. This town was almost destroyed by Alexander the Great in 329 B.C. In the 8th century the town seems to have already been known as Samarkand and had become an important seat of Arab civilisation. In 1221 it was besieged by Genghiz Khan, and pillaged so thoroughly and brutally that its population was reduced to a quarter of what it had been. Subsequently Timur or Tamerlane (Timur the Lame—1336–1405) made it his residence and capital. The palaces, mosques and *madrasahs* (colleges) erected by Tamerlane and his successors still stand, though partly ruined.

The Righistan—a square, three sides of which are formed by the three *madrasahs* of Ulug-Beg, Shir-Dar and Till-Kari—forms the centre of Samarkand. The beauty of these buildings both outside and within has to be seen to be believed. The *madrasahs* are large, lofty, quadrilateral buildings, each with a great doorway in front and a high, deeply pointed porch. On both sides of the porch stand broad,

quadrilateral pillars of the same height, and two slender, finely decorated columns in their turn flank the pillars.

On each side of the doorway are two rather lower archways connecting with two beautiful minarets, narrowing towards the top and slightly inclined outwards, as a result of the ravages of time. The whole of the outside—the doors, columns, pillars and towers—as well as the interior, are decorated with a mosaic of enamel tiles in a wonderfully harmonious blend of turquoise-blue (the predominating colour), pink, green and gold. The intricate designs form patterns of singular beauty. Part of the Righistan buildings are still used as a place of worship, and we were introduced to the head of the Moslem church, a tall, pleasant-faced man who spoke Russian with a foreign accent, but quite well. He told us that he and his fellow-Moslems have complete freedom of worship under the Soviets. With great diffidence we asked if he would mind our taking a photograph of him, to which he graciously consented.

Of the three *madrasahs*, the smallest, built by Ulug-Beg, a grandson of Timur, is the most renowned for its school of mathematics and astronomy, which flourished in the 15th century.

From the top of the central tower of the Righistan (which is in the exact centre of the town) one gets a splendid view of the whole town. There are many other similarly beautiful remains of ancient buildings in Samarkand—among them the tomb of Tamerlane, the tombstone of which is composed of a slab of greenish-black stone about six feet long, in a chapel crowned with a dome. The walls of the interior of the chapel are ornamented with fine turquoise arabesques and inscriptions in gold.

Very interesting and beautiful, too, are the ruins of Tamerlane's palace and the palaces and graves of his wives. An extremely versatile and well-informed Soviet professor showed us round the ruins, and told us many a story and legend about these various buildings. According to one of these stories, Tamerlane's palace was built by himself. He watched every detail of its construction. When, for whatever cause, a wall during erection started crumbling, he had another built on to it. This happened many times, and in the end the thickness of the walls was enormous. To the various gates of his palace he gave the names of the most famous cities of the world, in order, so it was said, to demonstrate that his kingdom surpassed every other!

The Soviet authorities are making a comprehensive study of the ruins, the material of which the palaces, etc., were constructed and the

nature of the colouring matter employed, in order where possible to restore them to their original form and, where this is impossible, to preserve them from further decay. Few amongst even the most ignorant now chatter about the Bolsheviks being barbarians and caring nothing for ancient cultures, but if further proof were necessary to demonstrate the solicitude of the Soviet authorities to preserve all that is best in the inheritance of the past, this would be furnished by the care and efforts devoted to the restoration and preservation of the ruins of ancient Samarkand and other parts of Central Asia.

Tashmuhamed Kary-Niazov, until recently President of the Uzbek Academy of Sciences, prepared for us the following brief outline of the work done and being done in the restoration of the ancient monuments of Uzbekistan:

" The territory of the present-day Uzbek Republic is one of the most ancient seats of civilisation. The numerous old monuments to be found here are the object of constant care on the part of the Uzbek Government, which annually assigns large funds for their restoration and preservation. In the early days of Soviet rule a special committee was set up to carry out this extensive and valuable work. Its members study and restore relics of the Middle Ages, a period of particular interest in the history of the Central Asiatic peoples and known as the ' Central Asiatic Renaissance '.

" A thorough study has been made of the site of ancient Samarkand, capital of the mighty State founded by the celebrated Timur. A plan of the town as it existed at the time of the Timur dynasty has been drawn up, showing the exact location of the various monuments and buildings, many of which have survived to this day.

" An important piece of work done in Samarkand was the straightening out of the minaret of the famous *madrasah*, erected by Ulug-Beg, grandson of Timur and eminent savant and humanist of his period. The minaret was threatening to collapse, and it required much technical ingenuity on the part of the Soviet architects to save it.

" Equally important were the measures taken to preserve from decay the 17th-century *madrasah* in Samarkand, known as Shir Dar. The arch of its main portal was relaid. Restoration work was also performed on the coloured ceramic facing of another *madrasah* of the same period—Till-Kari, a structure of striking beauty and elegance. This work was made possible by the discovery of the lost secret of

manufacture of these coloured ceramic tiles which were used in Central Asia in the Middle Ages for facing buildings.

" Archæological research carried out in Samarkand led to the discovery of the remains of the celebrated suburban palace of Ulug-Beg. It was known in its time as the Porcelain Palace, because of the porcelain tiles with which the interior halls were lined, and which, according to legend, were brought from China on camels. Just prior to the war, a special Government Commission consisting of eminent archæologists, anthropologists, historians and physicians, observing all measures of precaution, opened up the vaults of the mausoleum Guremir, where lie interred Timur, his son, Shahruh, his grandsons, Ulug-Beg, and other of his near descendants. Highly valuable information was gathered.

" Extensive archæological researches have also been carried out by Soviet experts in ancient Khorezm. Excavations reveal that a very high culture once flourished in this city. Remains of monuments of diverse periods from the first to the tenth centuries of our era have been found buried in the sand. These finds are particularly valuable, as no written records exist of Khorezm of that period.

" On the western edge of the Bukhara oasis archæologists have discovered the remains of a palace, one of the most ancient monuments of the town of Barkhash, to judge by evidence taken from Narhash, the 10th-century historian of Bukhara. Barkhash flourished in the first millennium of our era, and for a long time it was the residence of the so-called Bukhar Kkudats, the rulers of the Bukhara oasis. The palace was built between the 3rd and 7th centuries, and for its magnificence and beauty was classed by Narhash among the seven wonders of the world. Very fine specimens of carved alabaster used to ornament the interior halls have been found.

" Archæological excavations have also been carried out in Termez, another of the ancient cities of Central Asia situated on the banks of the Amu-Darya. Here fine specimens of Græco-Bactrian art have been discovered.

" Extensive operations concentrated chiefly on the site of the Guremir Mausoleum are still continuing in Samarkand. Two years' research has revealed that Guremir constituted only part of a series of large architectural structures which no longer stand. This is confirmed by the discovery beneath a two-metre layer of sand of the remains of the foundations of a building, part of which was built prior to Guremir. Guremir, a monument of ancient Mussulman culture, is now being carefully restored. The Uzbekistan Government has

assigned two million roubles for the work, for which old-folk craftsmen, skilled in Central Asiatic art building, have volunteered their services. Collective farms have offered to provide the necessary building materials.

" One most valuable piece of research undertaken in war-time is the study of Shahr-i-Sabz, not far from which Timur was born. The ancient Mussulman monuments to be found in this town are in many cases not inferior in beauty and luxuriance to those of Samarkand, but until quite recently they had not been studied so closely. It is now possible to establish the date of erection of many of these relics, some of which proved to be much older than was originally supposed. Careful research has ascertained that one of the most ancient monuments in Shahr-i-Sabz, known to this day as Hazret-i-Iman, is actually the mausoleum erected by Timur and intended for himself and members of his family. However, as we know, Timur was buried in Samarkand.

" In Bukhara, extensive restoration work was carried out before the war in the celebrated 10th-century mausoleum of Ismail Samanid and the 16th-century Kalyan mosque, and during the war itself the palace of the 19th-century emirs of Bukhara was restored. It is now a museum."

Samarkand, where Scheherazade is reputed to have told the Sultan Shahriyar the stories of the *Arabian Nights*, the town so famous in poetry and legend, with its magnificent ancient architecture and luxurious gardens, is often spoken of as " the jewel set in sand ". And this is indeed the impression we got of the town when we reached it in less than one and a half hours' journey by air from Tashkent.

From the airport we drove in an open car through sandy streets which we found to be typical, particularly in the old parts of the town. The houses in the old town are small, white huts built of local material. There were also a number of fallen-down uninhabited houses which the authorities had so far had no time to replace by modern dwellings, although a very pronounced start had been made in this direction before the outbreak of the second World War. Now the work of rebuilding is again in full swing.

We drove through some narrow, winding streets until we reached what at first sight seemed a blind alley, on one side of which was a white wall with a large gate. It looked as though we had reached some old-fashioned inn, or that the wall surrounded a tumble-down

yard or small house, but when the gates were opened and we drove in we were astonished to find a delightful country house in the midst of lovely fruit, flower and vegetable gardens, surrounded by fields. The house itself was well furnished, and adjoining it in the gardens were spacious verandas with tables, couches, armchairs, a couple of beds; the floors were covered with brilliant carpets, the furniture with rugs and the tables with richly-embroidered spotless linen. There were also cushions with embroidered coverings. Here we made our headquarters while in Samarkand. Sanitary arrangements were, of course, primitive, but very clean.

The scenery in the neighbourhood of Samarkand is very desert-like, but in the distance are lofty, picturesque mountains. We took many drives and walks around the town—one day in particular was a market day, when the streets were thronged with people—some were riding donkeys, some camels, some horses and many, evidently peasants, were driving carts laden with various goods.

Men in gay caps and turbans mingled with women in long native cloaks and young girls, mostly in clean, bright European frocks, skirts and blouses, and some in the many-coloured silk native dresses. The bazaars were clean, animated, and presented rugs, silks, fruits, cutlery and all sorts of other wares for sale. We saw no signs of beggars. The children were also for the most part clean, but many were barefoot, whether by choice or from necessity we do not know. When we drove through the crowds, the people stared at our car, but they were polite, and very sensible in getting out of the way. But added to the glamour of the past, Samarkand has also a romance of the present and future.

The new town of Samarkand, with its wide streets and boulevards, with trees on either side, and many gardens and parks, typifies this present and future. There are many fine buildings—offices, schools, university, medical schools and technical colleges, hospitals, theatres, museums and libraries, dwelling-houses, crèches, kindergartens, children's homes, etc. Its population in 1946 was 150,000, and it is now the second largest city in Uzbekistan. It has a number of Kolkhozy and important industries, the equipment of which is nearly all of Soviet make. Among the industrial enterprises we visited in Samarkand was a silk factory, which was set in operation as a factory in 1926. Prior to the Revolution it had been a small handicraft workshop, now all the various processes of manufacture have been mechanised, and it employs 850 workers, the majority of whom are

women. Most of the workers are Uzbeks, but there are also Russians, Iranians and Jews.

The various workshops are light and airy, and some of the finished products we inspected were remarkably fine both as to quality, colouring, and design. We saw some lovely silks intended for the general market, and also very brightly coloured material with purely national (Uzbek) designs.

One thing struck us particularly—i.e., the large number of very young native Uzbek women in charge of the various departments, and also the fact that the chief engineer of the factory was a woman. We remarked on the youth of the heads of the various departments and, whether because of these remarks or not, when we were about to leave, one of the young women presented us with a bunch of flowers and with an engaging smile said: " Please accept these blossoms from our blossoming youth."

Among the Kolkhozy we visited was the " Krassny Bogatyr " or, to give it its Uzbek name, " Kizyl Kokhraman ". This was organised in 1929, fifty farmsteads then joining to form it. By 1936 some 260 farmsteads had joined it, and at the time of our visit it numbered 1,480 inhabitants. It had sixty-four bulls, 2,500 sheep, 201 cows, eighty-one horses. The outhouses were very well constructed, and as for its wine-cellar—we, at any rate, had never seen anything like the huge barrels of wine stored there.

The Kolkhoz cultivates grapes, potatoes, maize, cucumbers, tomatoes and a variety of other fruit and vegetables. The Chairman and many of the other officials of the Kolkhoz spoke very little Russian, and we had to use the services of the Mayor of Samarkand (a well-educated charming young man) to act as interpreter. The Kolkhoz has its own brick-kiln, good bath-houses and a ten-year secondary school. Housing still left much to be desired, but they were getting ready to start the building of new houses at an early date.

In this Kolkhoz, as elsewhere in Central Asia, the hospitality was positively overwhelming. We sat down for refreshments at a table in a shady spot of a very delightful garden soon after 1 p.m. Apart from the usual fruit, cakes, sweets, cucumbers, which were on the table all the time, dishes of meat of various kinds done in native fashion, including *shishlak* (pieces of meat roasted on a kind of skewer, from which one eats the meat direct) and huge dishes of rice, followed one another continuously, and it was not till 5.20 that, full to overflowing, we were permitted to rise from table.

We left Samarkand with regret (as indeed we left many other towns we visited in Central Asia), not only because both the great memorials of the past and their strange and glamorous beauty send a rapturous thrill through the whole of one's being and set one meditating, but the vivid signs of present-day progress give one an equally strong thrill, though of a different kind—a thrill of hope for the future.

Perhaps the most obvious and most striking sign of progress is that made in the sphere of culture: the schools in every part of this, as in other towns and in rural areas, the universities, theatres, concert-halls, museums and clubs. The town parks not only provide opportunities for physical relaxation, but also cater for cultural needs, providing, just as in the European parts of the U.S.S.R., reading-rooms, rooms for the playing of chess and draughts, concert-halls, etc.

The Uzbeks were in ancient times a cultured people. Among the best known Uzbeks were the encyclopædists Abu-Raikhon Biruni, Abu-Ali Ibn Sina, the philosopher Al Farabi, the mathematicians Mukhammed-Ibn-Muza al Khoresmi, Abu Makhmud-Khan al Khodzhendi, Akhmed al Fergani, the astronomers Ulug-Beg, Giyas ad-din Dzhamshid-ibn Mas Ud, Kazy-zade Rumi, Ala-ad din ibn Mukhammed Kuschi and others. But the common people were steeped in ignorance and ground down by poverty, and Tsardom ignored and suppressed all native culture.

The progress made in education and general culture may be illustrated by just a few figures. In the whole of present-day Uzbekistan in 1914 there were only 212 schools with about 47,000 pupils—mainly the children of Russian officials, the Russian and native clergy, merchants and beys. In addition, there were a number of schools attached to the mosques and churches, where the instruction consisted mainly of memorising the Koran, etc. There were no higher educational institutions and only four higher cultural institutions—the Tashkent Astronomical Observatory, a public library, the Central Asian Museum and the Golodny Steppe Experimental Agricultural Station. Not more than 2 per cent of the population were literate.

At the beginning of 1950 there were in Uzbekistan 4,500 elementary and secondary schools with over 1 million pupils, and 130 technical schools and colleges with a total of 45,000 students. Teaching is given in the native tongues of the various nationalities in any given area or district. It is an interesting fact that during the war years, 1941–45, some 225 new schools were built.

We visited a number of elementary and secondary schools in

Uzbekistan. These schools vary in size and structure, but for the most part they are modern buildings with small, bright classrooms, and wide, clean, airy corridors. One thing we noticed was the bare walls of the classrooms. We remarked on this, and were told that they were hoping to get maps and other educational hangings for the walls at an early date—the war had hindered them considerably in this direction.

The secondary schools had small but adequate laboratories. We saw lessons being given in arithmetic, writing, history, chemistry, Russian, English and German. The teachers were for the most part young Uzbek men and women who, although dressed more poorly, were by no means inferior in manners, cultural level and knowledge to their opposite numbers in other parts of Russia, Britain and other European countries. In some schools the language teachers were Russian. The children were cleanly dressed, often native fashion (as indeed were some of the women teachers; a number of the latter wore medals for long and good service in the schools) and, so far as we could see, intelligent and well-behaved.

While we were watching the progress of a lesson, most of the children tried hard to concentrate on what the teacher was saying, but, as might be expected, could not repress their curiosity regarding the visitors, and often stole glances at us. The children were being taught in their native tongue, but most of them could understand Russian, and when we spoke to them—as we often did—in Russian, some of them were very quick in their replies to questions.

In one case at an English lesson we expressed pleasure at the fact that they were learning English—that, we remarked, would enable them not only to read many good interesting English books in the original, but they could speak readily to English children if they visited England. Thereupon one bright little chap shot up his hand, and on being told by the teacher to stand up and say what he wanted, he declared somewhat shyly but firmly that he would like to visit England, but he thought it would be best for English children to visit Uzbekistan first, and then he and other Uzbekistan children would visit England. We promised to pass on this message, and he and the other pupils were obviously pleased.

One of our most pleasant recollections in regard to educational institutions in Uzbekistan was a visit to the Pedagogical College for Women. The building itself is a noble structure, both inside and out. It has large, airy lecture-rooms, good laboratories, museum and

library. There is also a fine, large assembly hall, with an artistically painted ceiling. The hall is used for physical culture practice and displays, and for the staging of plays and concerts.

The students study sciences (botany, biology, chemistry, physics, maths., etc.), languages (Uzbek, Russian, English and German), history, etc. But what impressed us even more than the building and its appointments were the students and teachers. Nowhere have we seen finer specimens of young womanhood than at this college. The girls are from eighteen to twenty-two years of age. They are well set up physically; many of them good-looking, simply but quite tastefully dressed (some in native, most in European costume). We entered a number of classrooms while lectures were proceeding on various subjects. The students certainly looked keen, intelligent and very interested—although, as in the case of the school children, they could not repress their quite natural interest in visitors from another country, and even though they followed the lecture and replied alertly and intelligently to the questions of the lecturer, they stole many a glance in our direction, and were obviously pleased when, as happened in a number of cases, the teacher broke off the lesson to give the students an opportunity to talk to us. We were particularly struck by the lecturer in higher mathematics. She seemed and, indeed, was very young, pretty and clever-looking, but, for all that, when we complimented her on her high achievements, she smiled shyly and was extremely modest.

In the course of conversation with students and teachers we learned that the college had some 2,000 students. Most were Uzbeks, but there were a number of other nationalities of Central Asia, as well as Russians; there were also a few Koreans. Most of the girls intended to become teachers, but some hoped to continue research work in the various sciences and languages when they had finished their course at the college.

We had a particularly long talk with the girls in an English class, and it was most pleasing to find that these girls obtain a good speaking as well as reading knowledge of English. We spoke to them in English, and they understood perfectly, and replied—true, often slowly, but for the most part correctly—in English. Their favourite English authors were Dickens, Shakespeare, Byron and Jack London (they drew no distinction between American and British authors), in this order. They had also read and liked very much George Bernard Shaw, Priestley, Galsworthy and others. They were keenly interested

in international affairs (and here they bombarded us with many questions relating to British home affairs and foreign policy).

It was symptomatic of the attitude of the Soviets towards culture that in April 1918, when Soviet power had not yet been firmly consolidated in Central Asia, and the tasks for economic and political reconstruction and organisation were still formidable, the Turkestan People's University was opened in Tashkent. Lenin and his colleagues intended this university to form a centre for the spread of culture in Central Asia, and to train personnel from among the natives of Central Asia for the economic and cultural development of Turkestan. To help the university, the Moscow and Leningrad (then called Petrograd) Universities sent professors and teachers, as well as books, educational and laboratory equipment of all kinds.

At first this university was more in the nature of an educational institute rather than what is usually understood as a university. After a two-year period of preparation Lenin signed a Decree on September 7, 1920, instituting the Turkestan State University. The university at first consisted of five departments and a Workers' Faculty (i.e. classes to prepare workers who had not had a secondary education for entrance into the university).

After the redistribution of the territory of Central Asia in 1924 and the formation of the Uzbekistan Soviet Socialist Republic, the university began to take a more active part in aiding the economic development of Uzbekistan. By 1929 it had become the most important teaching and scientific centre for the Central Asian Republics. Its students numbered 3,000, with a staff of seventy professors and seventy-five tutors. It had a large library, an extensive network of experimental stations, laboratories and other auxiliary units. Certain departments had grown so large and had so extended the scope of their work that when the university was reorganised in 1930 a number of them became separate colleges and institutes.

The list of independent colleges and institutes which were originally part of the Central Asian State University includes the Industrial, Medical, Irrigation and Mechanisation, Finance and Economics, and Pedagogical Institutes in Tashkent, the Institute of National Economy in Samarkand, the Veterinary Institute in Ashkhabad and the Agricultural Institute in Leninabad.

During the first twenty-five years of its existence the university graduated 3,625 mathematicians, physicists, geo-physicists, chemists, geologists, historians, botanists, zoologists, soil specialists, and others.

In Samarkand is situated the Uzbek State University. Here we had interesting talks with the Assistant Director (the Principal was away at the time), some of the professors and students. The university had been started in 1927 as a pedagogical institute, in 1930 it was reorganised into a pedagogical academy and in 1933 was transformed into the Uzbekistan State University. At first the teaching had to be conducted in Russian, as there were no native qualified teachers, but in 1938 Uzbek scientific workers graduated, and since then work has been conducted more and more in the Uzbek language. This university is a fine building, but it is not so large as the Central Asian University at Tashkent and, so far, not quite so well equipped. It has some 900 students, fourteen professors and seventy-one lecturers and assistants. The students receive a stipend of 150 roubles a month and pay fees of 300 roubles a year. In the physico-mathematical faculty they are making a close study of the application of the sun's energy.

We asked some of the professors what they thought of the atomic bomb. " The atomic bomb? " they said, with a shrug and a smile. " We do not think it necessary to worry about it; we are far more interested in studying the nature of the atom."

" But what about atomic energy? " we insisted.

" Oh yes, we are interested in atomic energy," they replied; " but not in its application for destructive purposes. Our approach is quite different—we are interested in the matter on the one hand from a purely scientific point of view, on the other from the point of view as to how atomic energy can be harnessed to industry, to serve the constructive interests of the people."

This was the gist, in varying terms, of a number of similar conversations.

In one case a professor remarked drily that to discuss atomic energy from the point of view of the construction of atom bombs is equivalent to thinking of electricity in terms of the electric chair!

By 1939 Uzbekistan already had twenty-nine higher educational institutions, as well as nineteen scientific research institutes, three observatories, eleven museums, twenty-three various scientific stations and six other research institutions.

In 1939 an Uzbek branch of the Academy of Sciences of the U.S.S.R. was formed, which in November 1943 was transformed into the Uzbek Academy of Sciences. By 1946 most of the members of the Academy were native Uzbek scientists. The President (when we met him he was Vice-President) of the Academy, Tashmukhamed Alievich

Sarymsakov, is an Uzbek of medium height, dark, young, alert and highly cultured. Most of the other academicians whom we met seemed much older than Sarymsakov. He is a graduate of the Central Asian University, and has several noted mathematical works to his credit. For his outstanding services in mathematics he has been awarded the " Order of the Red Banner of Labour ".

In 1946 the Academy had three departments—Humanities (the Head of which is the noted Uzbek writer and poet Aibek), Natural Science and Mathematics (Head, Professor Romanovsky) and Technical Studies. In 1947 another department—Biology and Agricultural Science—was added.

At a meeting of the Uzbek Academy of Sciences in June 1947 it was reported that during the three and a half years of its existence fourteen scientific institutions had been added to the Academy's original ten, and its staff of research workers had increased from 216 to 470. In 1950 there were twenty-five research institutes with about 1,500 science and research workers.

The Academy has some fine laboratories, most interesting historical and other museums and libraries. The rare manuscripts department of the Academy library containing some 150,000 volumes of rare manuscripts, is particularly interesting, with its ancient illuminated and illustrated manuscripts and books. A tall, almost bald, Uzbek, with Budenny-like grey moustache and dressed in a white drill suit, showed us round, and described the contents with great enthusiasm and evident love.

The public library of the Academy has a splendid collection of books, including many rare ones, of which one is the only copy extant of the first book printed in the Uzbek language. The library is open to the public from 10 a.m. to 10 p.m. every day at a small cost. Books are not lent out.

As in the case of the Kazakhstan Academy of Sciences, the Uzbekistan Academy, in addition to its theoretical, chemical and other scientific researches, has carried out important work in the location and study of useful minerals, soil cultivation, water resources, irrigation, the possibilities of the Golodny Steppe; the production, utilisation and modern development of hydro-electrical energy, subjugation of the wind for agricultural purposes and energy production; the study of the utilisation of local chemicals, the improvement of fertilisers, the artificial production of various natural chemicals, the flora and fauna of the Republic, etc.

Noted astronomical work has been and is being carried out by the Tashkent Astronomical Observatory. Its work in Astrophysics is very varied, but it devotes particular attention to the study of the sun. During the war the Observatory became one of the most important observation stations in the service of the Red Army and Postal Services.

Much important work has been done by the Institute for Languages and Literature of the Academy in the study of the Uzbek languages and literature.

A long literary tradition preceded the formation of the modern Uzbek literary language. The old book language—"*chagatai*"—differed very greatly from the speech of the people, and although during the last quarter of the 19th century and the first quarter of this century some modernisation of the language was carried out, it was not until after the Soviet Revolution that a national Uzbek language developed, based on the natural speech of the people. However, the old written language influenced the modern language. The older generation of the Uzbek intelligentsia was educated on the literature of the old written language, so that it has been, and still is, a very important factor in the development of the modern literary tongue.

The Uzbek spoken language is not uniform throughout the country, and even in one and the same district one meets with people who speak two or three different dialects. The literary language is based mainly on the dialect of the big cities, chiefly Tashkent and Ferghana.

In order to satisfy urgent needs, two bilingual dictionaries—Uzbek-Russian and Russian-Uzbek—each in two editions (comprehensive and shorter editions) have been issued. A Russian-Uzbek dictionary for school use has also been published.

Among other important tasks in this direction was the evolution of a simplified but dignified literary Uzbek language. The Language and Literature Institute also took an active part in the reform of the Uzbek alphabet, replacing it by the modern Russian alphabet. This made it easier for the Uzbek people to assimilate their written and printed language, as well as making the Russian language and literature fully accessible to them.

Uzbekistan, like Central Asia generally, is rich in folklore, and soon after the Soviet Revolution a beginning was made to study and collect the traditional songs, stories and poems of the Republic. The folklore library of the Uzbek Academy of Sciences includes over eighty *dastans* or epic poems, about 500 fairy tales, over 600

songs and thousands of smaller folklore pieces. This material has been collected and recorded by folklore expeditions and individual collectors in the Samarkand and Bukhara Regions, in the Ferghana Valley, in Khorezm, in the environs of Tashkent and in various other parts of Uzbekistan.

The Uzbeks are past-masters at improvising songs and poems. The following story by one who was present during the incident is characteristic. On one occasion during the war members of the Andizhan collective farm brought a present of rice, fruit and vegetables from the Kolkhoz to the workers of armaments' factories in Tashkent. The workers, delighted with this present and show of goodwill, a few days later sent a delegation to Andizhan to thank the members of the Kolkhozy. Amid the clatter of the wheels of the train, an Uzbek native poet improvised verses about the generosity of the Andizhan Kolkhozniks, and there and then a musician came out with his *changi*—a native musical instrument—and set the words to music. Soon the whole train was singing the song and, says the narrator, by the evening there is little doubt that the song was being sung in far-off villages, passing from mouth to mouth, no one having any idea as to who had written and composed the song.

In similar ways many an ancient folk-song and story were born; among the native Uzbeks there are tellers of stories and singers of verse who know by heart, and constantly recite, hundreds of thousands of verses. These are honoured and loved by the people.

Since 1939 and during the war years many Uzbek epic poems, folk-tales and popular romances have been published in book form, both in the Uzbek and Russian languages.

" At present," said V. M. Zhirmundsky, corresponding member of the Academy of Sciences of the U.S.S.R. and Director of the Folklore Section of the Academy of Sciences of the Uzbek S.S.R., " we are in possession of scores of *dastans*, or epic poems, on various subjects recorded in Uzbekistan. The Uzbek *dastans*, like the epic poems of most Turkic peoples, consist of verse parts alternating with prose. They are sung and told to the accompaniment of the *dombra*—a popular instrument resembling the lute. The best singers and story-tellers (known as *bakhshi*) have a repertory of from twenty to thirty such *dastans* of from 3,000 to 6,000 lines each.

" The subject-matter of Uzbek folk-epics is highly varied and reflects the different social systems and modes of life that existed in

Uzbekistan prior to the November Revolution—from the nomadic and semi-nomadic condition with the persisting survivals of patriarchal clan relationships to the refined culture of the old feudal town which developed in the course of centuries, as in Samarkand and Bukhara. In the repertory of the Uzbek folk-singers we find the remarkable ancient heroic epic of the steppe nomads, ' Alpamish ', and the martial story ' Yusuf and Ahmed ' of the 16th to 17th centuries, historic epics reflecting the eventful past of the peoples of Middle Asia (' Edighe ', ' Sheibani-Khan ', etc.) and romantic *dastans* in which the heroics of chivalrous feats and adventures are combined with love-motifs and fantastic fairy-tale details (' Kunigmish ', the ' Rustam-Khan ' series, etc.). The romantic *dastans* are strongly reminiscent of the romances of Medieval Europe, like King Arthur and his Knights of the Round Table, which succeeded the old heroic epos and betrayed the influence of book literature, such as the Persian adventure and love romances which were widely circulated in the Moslem East and the Persian and Uzbek ' Popular Books ' which developed from them.

" Heroic and romantic motifs are combined in the poems of the Gorogly cycle recorded in Uzbekistan. The legends about Gorogly, or Ker-Ogly (' Son of a Blind Man '), are widely known among the peoples of the Near East, Transcaucasia and Middle Asia. In the Middle-Asian epos Gorogly is a legendary monarch, a wise ruler and a mighty hero and defender of his country. There are records of forty Uzbek *dastans* about Gorogly, in which are set forth the exploits of this popular hero, his adopted sons Avaz and Hassan, his grandsons Nurali and Ravshan and his great grandson Djakhanghir."

But it is not folklore alone which has been revived in Uzbekistan. New editions of Uzbek classics, particularly the works of the great 15th-century national Uzbek poet and writer, Mir Ali Sher Navoi, have been and are being published in the Uzbek and Russian languages.

Some years ago the Uzbek Academy began work on a dictionary of the language of Navoi. A number of Uzbek ' Navoihon '—those who know and love Navoi—have been drawn into the work.

Alisher Navoi, the five hundredth anniversary of whose birth was celebrated in 1948, is the father of the Uzbek literary language. He is the great national poet and fighter for the rights of the people of Uzbekistan. As Vizier in the second half of the 15th century, Navoi used all his influence to consolidate the centralised State, and struggled hard against the feudal wars and harsh customs. His whole life is said

to have been characterised by his saying : " If you are a man you should not regard anyone as a man who does not strive for the well-being of the people."

Naturally Navoi had many enemies, and he suffered for his views and acts, but he has a very warm corner in the heart of both the intelligentsia and the people generally of Uzbekistan. A film of his life was made recently, which on the whole is said to portray the character and struggles of Navoi quite successfully.

Research into the history and literature of Uzbekistan, which is growing in scale from year to year and attracting numerous young scholars, calls for special handbooks and reference books, especially for beginners. The Institute for the Study of Manuscripts of the Uzbek Academy of Sciences is accordingly planning to complete a large reference work containing brief biographical notes on outstanding Central Asiatic rulers, writers, scholars, artists, musicians and bards, as well as potters, carvers, carpet-makers and other craftsmen. In view of the close cultural relations which have existed from ancient times between Uzbekistan and India, a prominent place is being given to Indians who have, in one way or another, influenced Uzbek culture.

The Russian classics, as well as the works of the best modern Soviet writers, have been and are being translated into Uzbek.

Uzbekistan can also boast many modern native writers and poets. Among the most noted of these are Aibek, Gafur Gulyam, Khamid Alimdzhan (who died recently), Sheikhzade, Zul-iya (a poetess), Sabir Abdulla, Izat Sultanov, Ugun and many others.

As in the rest of the U.S.S.R., Uzbek writers value and welcome criticism. At the headquarters of the Union of Soviet writers of Uzbekistan in Tashkent a big mail is received almost daily. Letters and manuscripts arrive from every part of the Republic.

The letters thank writers for their prose or verses, some make valuable, and sometimes, of course, not such valuable criticisms; others make suggestions, some good and some not so good, for future work. Young authors from far-off towns and villages send their manuscripts, asking for expert literary advice on them, and this is gladly forthcoming from older experienced writers.

Very frequently prose-writers and poets, old and young, meet at the headquarters to read their new works to one another and help one another by free, frank, unfettered criticism and often very valuable suggestions.

One of the first things we noticed in the general rooms of the

hotels, clubs, rural Soviets, etc., in Tashkent and other places in Uzbekistan were the daily and weekly papers and other journals in the Uzbek and Russian languages. There were also invariably to be seen *Izvestia*, *Pravda* and other central Russian periodical publications. This was very interesting, because before 1917 only one regular newspaper (in Russian) was published in the whole of Russian Turkestan—*Turkestanskiye Viedomosti* ("Turkestan Gazette") with a circulation of less than 2,000. There was also in Uzbekistan the *Turkestanskaya Tuzemnaya Gazetta* (Turkestan Native Paper), published twice weekly, with a circulation of about 500. This was the official organ of the Governor-General, and its columns were filled mainly with official Government orders and documents.

All this was changed with the coming of the Soviets. Already by 1924 twenty-four newspapers were published in Uzbekistan; by 1934 there were fifty papers, with a total circulation of 400,000, and in 1939 there were over 200, with a circulation of about 1 million. By 1945 every district of Uzbekistan had its local press in the native tongue. In addition there are about twenty political, literary and art journals, twelve of which are in the Uzbek language; there are also some seventeen various Bulletins.

As regards libraries, the story is similar. The first Russian library in Turkestan was opened in Tashkent in the eighties of last century. Its main object was the collection of publications dealing with Turkestan. In 1917 it had some 4,500 books used by about 1,000 subscribers and a small library belonging to the Pushkin Society (this is still in existence). After the laying down of a railway at the end of the 19th century, there were organised in some provincial towns (in Samarkand, Novoi Margelan, etc.) a number of library-reading rooms. By 1915 there were some fourteen libraries in Uzbekistan, but there was not a single library for the use of the native population. Again the coming of the Soviets wrought a complete transformation. By 1924 there were forty-three libraries in Uzbekistan, with 171,700 books; the numbers grew steadily from year to year, and by 1938 there were 1,441 libraries, with 2,158,000 books; 975 of these libraries, with 729,400 books, were in rural areas. There are also 150 specialised libraries, with some 3,500,000 books, and about 1,000 school libraries. All the libraries are supported by the Government, and the librarians are specially trained for this work, so that they can give valuable help to readers in the selection of books, etc.

The Turkestan Public Library was transformed into the Uzbekistan

State Public Library. This Library has made and is continuing to make valuable collections of material concerning Central Asia, covering every phase of the study of this area. It is also making a collection of books in the native tongues of the peoples of Central Asia, and by 1945 it already had some 30,000 volumes.

The collection of Eastern manuscripts made by the Library is one of the most remarkable in the Soviet Union. There are some 12,000 volumes, containing about 40,000 manuscripts of various Eastern authors, and this forms very valuable material for the study of the literature and culture of the peoples of Central Asia. The oldest manuscripts date back to the 13th century, but the Library also contains material relating to the 10th century. It also contains some 2,500 volumes of Russian and Western European publications of the 16th to 18th centuries.

When we visited some of the museums of Central Asia we were struck by the fact that here, as in European Russia, the arrangements of the various rooms and the general lay-out of the exhibits pursued a well-thought-out plan, so that the visitor can follow with ease and pleasure the history of a given subject as illustrated by the specimens, the fauna and flora of a given district or the Republic as a whole, etc. We remarked on this, and one of the assistants replied: "Naturally our museums are no longer mere *idzhaipkhany*." We were puzzled, and he laughed: "You don't understand?" This is what our people used to call the small museums of old. It means 'houses of wonder'."

"But they still are that to the uninitiated, are they not?" we remarked.

"Yes," he said, "but not merely that any longer. You see, at one time we had in Uzbekistan two kinds of museums. There were those of Tashkent, Ferghana and Samarkand, which exhibited mainly articles of local produce, and these and the exhibitions they organised pursued purely commercial aims; they helped the merchants in selecting articles for export. Then we had smaller museums of specimens of ancient Uzbekistan culture, of remarkable natural finds, minerals, coins, flora and fauna, etc. These were collected by private amateurs and were exhibited haphazard, so that they were just 'objects of wonder' to the visitor. Now these exhibits may still be objects of wonder, but they also serve to spread a knowledge of the history of our culture and the natural resources of our land."

In 1945 over 100 scientific workers were employed in Uzbekistan museums. Curators of museums have been specially trained in long-term courses in Moscow and Leningrad.

The Uzbekistan Ministry for Education now has under its control sixteen museums, with some 500,000 exhibits. There are branches of the various museums in rural as well as urban areas.

Judging by the huge audiences, the Uzbeks are evidently very fond of the theatre and cinema. There are some fifty permanent theatres in Uzbekistan. We visited quite a number of both. We saw some delightful ballets and light operas—these were for the most part based on old stories of the Khorezm Khans, their tyranny and the struggle of the people against it. The music, dancing and décor were very pretty, but it struck us that there was too much stress laid on the stories of the heroes of a bygone age. It seemed to us that the great heroic episodes of the nearer past, the struggle and triumph of the Soviets, might well find more frequent treatment. We gathered that in the near future this would be the case.

The theatres in Uzbekistan, as in the other Central Asian Republics, however, also present Russian and other classical plays and dramas. Shakespeare is very popular, and we witnessed a performance of " Othello " in which the acting was really splendid.

The interest of the ordinary Uzbek citizen in the theatre is illustrated, for instance, in the building of the Uzbek State Musical Theatre in Tashkent, which, when we visited it, had not yet been quite completed. This theatre was almost literally built by the people themselves. It was begun in 1943, and the Government provided the funds for material and for the full-time employment of a comparatively small number of experts. The local people devoted much of their spare time to the actual work of building, and they were certainly making a very fine job of it. A more ambitious structure is the new Opera House or, to give it its full name, the " Alisher Navoi " Academic Theatre of Opera and Ballet, opened in November 1947. When we were there it was nearing completion.

This Opera House was started before the war, then on the outbreak of the war the work was interrupted, but in 1943 it was recommenced. The chief architect—a tall, fine, cultured man—showed us numerous photographs and pictures illustrating the working out of the plans. Their aim was to build a comfortable, efficient theatre which would at the same time be a thing of beauty architecturally—and it was indeed that. In the chief foyer, where a marble statue of Alisher Navoi is to be erected, the walls are painted with scenes from the works of this great Uzbek national poet.

The theatre has six other foyers, each decorated in the styles of the

various regions of Uzbekistan. The decorations were carried out by the finest Uzbek craftsmen of the various regions, and are indeed lovely. In the Bukhara foyer the walls and ceilings are covered with intricate openwork carving in alabaster mounted on mirrors. We saw a number of the craftsmen, young and old. Among the latter who supervised the work were Usto Shirin Muradov and Tashpulut Aslankulov, both of them honorary members of the Uzbek Academy of Sciences. The young workers told us that they loved the work, and before being trained by the old craftsmen they had attended special schools and courses. They spoke very affectionately of the master craftsmen who had given them their final training. The unskilled work was being done by Japanese prisoners of war in 1946.

The auditorium has accommodation for 1,500, and the walls are ornamented with Eastern scenes. The theatre is faced with marble, as is also the grand staircase. Pale blue majolica, so prominent in ancient Uzbek building, is much in evidence. The grounds around the theatre were to be planted with decorative trees and flowers. The building is somewhat, but not wholly, in the oriental style. We remarked on this, and were told that in most of the buildings now being erected they endeavoured to combine the best of Western architecture with the Eastern style.

" We have no objection to adopting what is good and fine in the West," said the chief architect, " but we have no intention of losing our own individuality." Anyway, there was no doubt in our minds that when completed this Opera House would make a splendid building which could well grace any European capital.

Finally, as an illustration of the tremendous change wrought in Central Asia during the last thirty years, we give two extracts—one illustrating the position of women in Uzbekistan, where, as we pointed out before, previous to the Soviet revolution they were wholly and doubly enslaved: to their masters and also to their own menfolk.

The first extract is taken from the diary of Sara Ishanturayeva, an Uzbek woman member of the Uzbek Parliament. In addition to being a Member of Parliament, Sara Ishanturayeva is a well-known Uzbek actress. Her story is a simple one, and with modifications characteristic of many Uzbek women in other spheres. She was the daughter of a poor peasant family, and was left an orphan by the death of her father before the establishment of Soviet rule in Uzbekistan. The little girl was brought up by the Soviet State. She early displayed

her inclination for the theatre, entered a theatrical school and became an actress. Enjoying great popularity among her people, she was elected a deputy to the Uzbek Parliament. Here are her diary extracts:

"*May* 15, 1947. Today I received a letter from the collective farmers in the Namangan Region. They say that the cold weather has affected their cotton plantations and that they want my help in getting extra supplies of mineral fertilisers at once. Apart from this setback they write that they are making very good progress on the plantations and are confidently expecting a better harvest than last year.

"*May* 17. A very good day. I got a reply to my letter to the Council of Ministers of the Uzbek Republic asking for extra fertilisers to be sent to the Namangan cotton-farmers. The Council of Ministers has sent instructions to the Uzbek Chemical Trust to ship immediately 43 truck-loads of nitrates and superphosphates to Namangan. My petition to send additional agricultural machines to Namangan has also been granted.

"I decided to take a trip to Namangan myself, so as to bring this news personally to my constituents. At the same time I will be able to see for myself how they are doing and what other help they need.

"*May* 19. Here I am in Namangan city, having come by airline from Tashkent. In the plane with me were two building engineers from the Ministry of Municipal Economy, on their way to the villages of Namangan Region in connection with the rural improvements scheme. And there was also a 90-year-old peasant with a long grey beard, going home to his village from a visit to his nephew in Tashkent. He told me that in the old days he had often made the journey along the Ferghana Valley on the back of a mule, but now here he was, travelling by air. He kept pointing out the various cotton plantations and vineyards as they flashed by below us.

"I went over to the Executive Committee of the Regional Soviet and had a long talk with the chairman. With him I arranged the details of my trip round the farms, and this evening I went to the 'Brlik' collective farm just outside the city. Here I met a delegation of the Kassan-Sai District farmers who had arrived to check up on how their neighbours were carrying out the conditions of the cotton-growing competition which had been arranged between them.

"*May* 20. I spent the day at the 'Soviet' collective farm, Yangi-

Kurgan District. I was welcomed by the 55-year-old chairman Dadakuziyev, a former poor peasant, and we held a meeting in his office with a number of the collective farmers.

"We talked about harvest prospects. Last year this farm had harvested one ton of cotton per acre, which was more than had been demanded by the State plan. In recognition of this the farmers received an additional payment from the State as premium, over and above the basic price for cotton. This year they want to raise the average yield to 27 cwt. an acre, which explains why they were so particularly anxious to get extra fertilisers. I was happy to tell them that the fertilisers were on the way.

"They told me about the changes which had taken place on their farm. It seems that last year's management committee was only interested in cotton-growing and had refused to pay attention to developing silkworm cultivation, from which a considerable income could be derived. So last autumn most of the old management committee failed to get re-elected, and new members were elected in their place.

"*May* 21. This evening I spoke at a meeting in the village of Alikhan. It is a very picturesque spot. Next to the whitewashed mosque is a fish-pond fed by several springs, and by it a number of shady plane trees with storks' nests. Here the collective farmers gathered in the evening, and I gave a report on my work as their deputy.

"They told me that their harvests are steadily growing year by year and that deliveries of industrial goods and building materials via the railway station are also increasing. They asked for my help in getting more lorries.

"*May* 22. Today I arrived at Nanai, the most remote part of the Region. A good many new houses, as well as a new school, have recently been built here. Now they are building a small hydro-electric station on the mountain stream. But I found that the regional trading organisations are leaving this district out in the cold. Whereas in other districts the peasants can easily buy dress materials, shoes, kitchenware and other articles, here these things are all in short supply. I will take this up when I get back to Namangan.

"The local Soviet told me they wanted more machines for road construction in the district. I will take this up in Tashkent.

"*May* 24. I received an enthusiastic reception today at Chust. Some time ago I had forwarded an application for assistance in getting

an improved water supply for this district, and just recently their new water-pipe system was completed. They say they now have an excellent water supply.

" *May* 25. This was the day I have been looking forward to more than any other on this trip. For here I am at Besh-Bulak (Five Springs), my birthplace. I can't describe what I felt as I walked through the same village streets where once I ran about, a barefooted girl. Who could have believed that I, the daughter of a poor peasant, would become an actress and a member of the Soviet Parliament? I thought of my father, broken by poverty, who died before the Revolution and did not live to see the happiness of his people and my own happiness.

" The village people live in bright new houses. There is a new school, medical aid station, maternity home and nursery school. The collective farm is doing well. The cotton plantations and vineyards extend all around the village, and the orchards are in bloom.

" It was not so very long ago, I reminded myself, that all this land belonged to a feudal lord. The young people of the village don't realise what this meant. They find it hard to understand the stories of the hard life of the peasants in the old days.

" *May* 26. Back to Namangan for a meeting with the Regional authorities. I gave them a list of the requirements of the collective farmers, and we worked out which could be satisfied by the regional organisations themselves and which must be referred to the central authorities in Tashkent.

" Tomorrow I return home to Tashkent."

Our last extract is from a report in the *Moscow News*, from their Tashkent correspondent of an Uzbek Children's Art and Technical Exhibition in Tashkent. This report bears out all that we ourselves saw and heard there.

" The vast changes wrought in the life of Uzbekistan, former colonial borderland region of Tsarist Russia, were forcefully brought home to me when I visited a large children's exhibition in this city recently (September 1947). There were thousands of drawings, paintings and technical models created by children only one generation removed from the days when Uzbek youngsters had to toil in the fields from an early age, when young girls were sold into marriage and when an education was an unattainable dream for the over-

whelming majority of the youth. Whether the specimen of the work of Uzbekistan's budding artists and engineers was a painting or a most complex technical model, the exhibition clearly reflected the tremendous progress made by this land from a semi-feudal colony to an industrialised Soviet republic.

" The exhibition represents what children have done at numerous drawing and embroidery circles and in manual training shops and laboratories of children's technical stations.

" It represents more than just that, however. It reflects the dreams, impressions and feelings of the Uzbek child of today, for the objects on view were received from all the cities of the republic without exception and from hundreds of villages, including the most remote.

" Many of the pencil and brush sketches and fancy needlework are executed with genuine æsthetic taste. A point of interest is the fact that in the majority of cases peacetime themes prevail over war themes, with only rare drawings of tanks, aircraft and battles to be seen.

" The section of the exhibition devoted to drawings occupies a large hall with about 1,000 works, the very number of which is an indication of how much youngsters like to wield pencils and the brush. Drawing, as is known, is one of the subjects taught in school, but the drawings sent to the exhibition are chiefly those made by children outside of school hours, in drawing circles which function at schools and children's clubs. In this connection it may be remembered that before the Soviet Revolution the religious superstitions prevalent among the people of this republic discouraged drawing, particularly making representations of the human likeness.

" Most interesting, however, is the collection in the halls devoted to the work of numerous technical circles and recreation centres. Making the round of them supplies a vivid conception of the swift industrial development that has taken place during Soviet times in Uzbekistan.

" Technical centres are maintained for children not only in the cities but in a number of the villages of the republic. The plan of their work is drawn up by the children themselves, each child as an individual or as part of a group doing what he wants to do most. The result is a great range of interests. Radio sets, electric locomotives, yachts and launches, self-propelled vehicles, engine-powered aircraft that fly—these are only some of the larger models in the technicians' hall.

" Among the objects on view is a talking robot—a large doll with

a cleverly hidden radio set inside. In making this robot both boys and girls took part, with the girls not only fashioning the doll itself but also some parts of the radio.

" Next to this there is a model of a solar furnace functioning at a local canning factory. With the aid of a system of large mirrors the sun's rays are employed to heat water up to 300°. Tashkent children built a complex model which heats water up to 116° in the visitor's presence. Youngsters whose hobby is physics built their own railway line, the locomotives run by self-made power installations.

" One of the things on view is a model of a section of a town block received from Samarkand, a city which formerly did not have a single industrial enterprise. Street cars run past tiny factories, school buildings, clubs, flower shops and public monuments, and in the houses little lights twinkle through the windows.

" In ancient Kokand children made radio sets of various types. Tashkent youngsters built a tiny lathe with a motor, a human hair serving as the driving belt.

" Interesting enough, in the technical department there are very few utopian projects. In most cases the children strive not only to copy what already exists in real life but also to advance something new, to incorporate some new invention. But of course this is all striving, since the models on view are made by children, although among them are not a few betokening the hand of gifted future inventors and engineers.

" That the industrialisation of Uzbekistan by no means suppressed the folk-art of the people is also clearly seen in the section given over to creative efforts in ceramics and wood carving. There are fanciful jugs, teapots, bowls and dishes sent by the school children of Rishtan, Kitab and Tashkent, and lovely caskets with stylised carving and mosaic work from Khiva. A separate corner is given over to the work of naturalists and other youngsters who go in for plant breeding and agricultural studies in general."

The position of women in any given country is an important index of its degree of progress and civilisation. On the other hand, the children everywhere are the hope of the future, and it is quite evident from this report, as from everything else we saw in Uzbekistan and in Central Asia generally, that the future of Soviet Central Asia is indeed secure, materially and culturally.

And now a final word regarding the post-war Five-Year Plan for

Uzbekistan. In accordance with this plan, capital investments in the Uzbekistan economy during the years 1946–50 will be 3,900 million roubles, including 1,266 million roubles for work under the Republic's jurisdiction.

Electric power-stations with aggregate capacity of 303,000 kilowatts, including hydro-electric stations of 266,000-kilowatt capacity, will be built and set into operation; the construction of a steel mill is to be completed, an artificial-fibre mill erected and two superphosphates plants built and put into operation; 28,000 spindles are to be installed and put into operation in the Ferghana cotton-textile mill and 60,000 spindles in the Tashkent cotton-textile mills. The capacities of agricultural machinery works are to be expanded, the production of textile machines organised, and the output of medium and small hydro-turbines and chemical equipment increased. The construction of a new nitrate fertiliser plant and of a copper works and zinc works are to be begun. The sinking of mines in the Angren coal-field are to be speeded up.

Some 665 new oil-wells are to be sunk, and the commercial resources of tungsten trioxide and natural sulphur extended. The Almalyk copper-ore field is to be prepared for exploitation.

In the industries under the Republic's jurisdiction municipal power-stations with an aggregate capacity of 10,900 kilowatts and coal-mines with a capacity of 350,000 tons are to be put into operation.

Industrial output by enterprises under the Republic's jurisdiction in 1950 is estimated at 2,800 million roubles, of which the output of State enterprises under local jurisdiction and of industrial co-operatives will comprise 550 million roubles. The output of dried fruit is to be increased considerably.

The following is the estimated output in 1950 of some of the more important goods:

Steel (tons)	86,000	Silk fabrics (metres)	14,000,000
Coal (tons)	1,130,000	Footwear (pairs)	6,150,000
Petroleum (tons)	1,066,000	Vegetable oil (tons)	173,000
Elec. power (thous. kwh.)	2,135,000	Granulated sugar (tons)	55,000
Superphosphates (tons)	300,000	Raw alcohol (decalitres)	1,300,000
Cement (tons)	270,000	Meat (tons)	20,000
Cotton fabrics (metres)	160,900,000	Fish catch (tons)	22,500

The estimated area under crops in 1950 is 3,313,000 hectares, including 2,985,000 hectares on collective farms: the area sown to grain crops 1,371,000 hectares, including 1,225,000 hectares on collective farms; the area sown to industrial crops 1,131,000 hectares, including 1,087,000

hectares on collective farms; the area planted to melons, potatoes and other vegetables 112,000 hectares, including 73,000 hectares on collective farms; the area sown to fodder crops 685,000 hectares, including 600,000 hectares on collective farms.

There is to be a further development of fruit-growing, viticulture and sericulture. The area under cotton in 1950 is estimated at 955,000 hectares. Abandoned and unused irrigated land amounting to 460,000 hectares is to be brought under cultivation, of which 320,000 are to be sown to cotton and alfalfa; 173,000 hectares of new land are to be irrigated and brought under cultivation and measures taken to improve the water supply and the condition of areas already irrigated.

Livestock by the end of 1950 is fixed as follows: horses, 498,000, including 458,000 on collective farms; cattle, 1,765,000 head, including 670,000 on collective farms; sheep and goats, 9,650,000, including 7,500,000 on collective farms.

The plan of State housing accommodation in the towns of the Uzbek S.S.R. to be made available for occupation in the period 1946–50 is fixed at 900,000 square metres, including 60,000 square metres to be made available by local Soviets. A trolley-bus service is to be introduced in Tashkent, and the capacities of the waterworks in Tashkent and Termez increased.

The main assignments in the spheres of cultural development and health services are as follows: by 1950 the number of schools will reach 4,740, with an attendance of 1,085,000, and the number of hospital beds, 29,600.

CHAPTER XII

CONCLUSION

WHEN we had finished the foregoing, we asked an acquaintance whom we knew to be rather unfavourably inclined towards the U.S.S.R. to look through our typescript and tell us what he thought of it. He returned it with the remark: "Very interesting. The Soviets do seem to have made a pretty good job of the development of their Central Asian territories. But you don't show the other side of the picture—you say nothing of the forced labour which has had so much to do with Soviet progress."

However, when pressed, our friend could not point to any direct evidence of "forced labour" in the U.S.S.R.—only Press and radio statements by people who in one breath have told us that convict (forced) labour is shrouded in impenetrable mystery, and in the other have proceeded to give exact figures of the alleged forced labour employed—ranging, according "to the taste and inclination" of the compilers, from five to sixteen million.

Impartial observers who have travelled widely in the U.S.S.R. have invariably scoffed at the legend; to give but two examples:

Mr. H. R. Knickerbocker, the well-known American journalist, in a talk over the Columbia Broadcasting System, June 21, 1931, said:

> "I worked as a correspondent in Moscow for two years, and last year I travelled about 10,000 miles through the Soviet Union to make a report on the Five-Year Plan for the New York *Evening Post* and the *Philadelphia Public Ledger*. If the Russian people are in chains, they have put them on since I was there. You can see a great many people on a ten-thousand-mile trip, but I saw no signs of forced labour under police compulsion. The only thing of that kind I saw was in one place out in the Iraks where we passed a road gang of convicts, who had been working on highway construction."

Knickerbocker concluded:

> "In the twenty-odd factories and mines I visited, many of them away off the beaten track, my chief impression of the workers was

> that they were a cocky lot; you would think they owned the country. Maybe they do and maybe they don't, but they think so, and I have never seen a slave who thought he was the boss."

And more recently Mr. Alaric Jacob writing in *Scenes from a Bourgeois Life* published in 1949, declared:

> "In all the years I was in Russia, including the far north, I never met with the least shred of reputable evidence to support the suggestion that millions of Soviet citizens are languishing in slave-labour camps."

In our own travels over large sections of the U.S.S.R., including Central Asia, we have never come across anything or anyone who could tell us about anything resembling what is usually called "forced labour".

When we pointed all this out to our friend, he remarked, "But if that is so, then why does the Soviet Government refuse an international inspection of her prisons and labour camps?"

The reply is that the U.S.S.R. has not refused an international investigation, but she has insisted that it must not be one-sided; if there is to be an investigation of alleged forced labour in the U.S.S.R., then conditions of labour in other countries—such as Britain, U.S.A., France, Holland and in the Colonial and dependent territory of these countries—should likewise be investigated by an international commission on which the workers, through their Trade Unions, should be fully represented.

The Soviet Government made a precise proposal on this subject at the U.N.O. on August 3, 1949, but her proposal was not accepted by the other countries. Why? Who was afraid of a thorough investigation?

There is no mystery about the employment of prison labour in the U.S.S.R. As in other countries, so in the Soviet Union, prisoners are given work of various kinds. But it is a principle of the Soviet penal system to reform, not merely to punish the criminal. The Corrective Labour Code lays it down that the corrective policy "shall not be accompanied by physical suffering or by the lowering of human dignity".

Corrective work is applied in various forms: for light offences a convicted prisoner may be sentenced to work, under supervision, at his own place of employment; for heavier offences, involving sen-

tences up to three years, prisoners are employed in corrective labour settlements; and for much more serious offences they would work on big public works, such as road-making, canal and railway building, etc., whilst living in corrective labour camps.

The prisoners are paid whilst at work at rates which must be approved by the Central Council of Trade Unions; they are given bonuses for extra work, and every effort is made to rehabilitate them morally and to convert them into useful citizens. In the vast majority of cases prisoners after having served their sentences return to ordinary life; their imprisonment is not allowed to hinder them from getting employment at their own trade or profession and from becoming useful self-respecting citizens.

Those who have seen the enthusiasm for and pride in their achievements manifested by the men and women in the Kolkhozy and Sovkhozy, in the factories, mines and workshops, in the schools, colleges and scientific institutions, can only dismiss with contempt the contention that the great economic and cultural progress of the last thirty-two years was based or even in the slightest degree dependent on forced labour.

This enthusiasm and pride we met when speaking to numerous workers, peasants, students, professors and officials. It was manifested during the celebrations of the anniversary of some of the Central Asian Republics. Here are a few examples:

On December 18, 1949, Tadzhikistan celebrated the twentieth anniversary of the establishment of the Tadzkik Soviet Socialist Republic. In the course of the celebrations of this event, a letter drawn up, widely discussed and adopted by numerous general meetings at factories and workshops, Kolkhozy and Sovkhozy, in educational and other institutions, was sent to Stalin. The letter stressed the great economic and cultural progress made by Tadzhikistan, and proudly stated that "our Republic now has a widespread national intelligentzia". It pointed out the enthusiasm with which the Tadzhik people rallied to the defence of the Soviet Motherland when it was attacked by Nazi Germany. "Tadzhik warriors," it declared, "participated in the battles for Moscow and Leningrad; they fought at Stalingrad and side by side with the sons of the other Soviet republics; they marched to Berlin. . . .

"Industry and agriculture worked as never before to supply the front with all necessities . . . the Tadzhik people were ready for and

made every sacrifice to ensure the defeat of the hated enemy and the defence of the liberties, honour and independence of their beloved Socialist Motherland."

Turning to the post-war period, the letter declared:

"The industries of the Republic have exceeded the annual plans year by year, and in 1949 their output was some 50 per cent above the pre-war, and a number of enterprises have already completed their post-war Five-Year Plan by December 1949 . . ."

The same is true of agriculture:

"The cotton-growers of Tadzhikistan have over-fulfilled the gross raw cotton production laid down for the end of the Five-Year Plan (1950) . . . Grain deliveries to the State exceeded the plan by 20·2 per cent and flax deliveries by 10·4 per cent."

Similar results have been achieved in other crops, silk raising, livestock breeding, etc.

Finally, the letter stressed the delivery of the Tadzhikistan woman from her age-long bondage—"men and women are equal citizens with equal rights", and concluded:

"We are proud of our flourishing Republic, which is an indissoluble part of the mighty union of Soviet Socialist Republics; at the same time we are also proud of the great economic and cultural progress of all our brother nations of the Soviet Union. We are proud of the fact that the whole Soviet people headed by you [Stalin] are a stronghold of democracy and peace and a consistent champion against all war incendiaries. . . ."

Again on January 15, 1950, D. Rasulov, Chairman of the Council of Ministers of the Tadzhik Soviet Socialist Republic, writing in *Pravda* in connection with the then pending elections for the Supreme Soviet of the U.S.S.R., also laid stress on the remarkable progress made by the Republic, thanks largely to the generous assistance of the Central Soviet Government and of all the other Republics of the Soviet Union.

"The Five-Year (Post-War) Plan for the development of cotton-growing has been accomplished within three years . . . cotton deliveries to the State in 1949 have been completed forty days earlier than in 1948 . . ."

Many industrial enterprises also fulfilled their Five-Year Plan before the end of 1949.

Rasulov recalled that " in 1925, Stalin, defining the fundamental problems confronting the Soviet Eastern Republics, had insisted on the necessity of creating industrial bases in these republics whilst simultaneously developing their agriculture and spreading co-operation between the masses of the peasantry, thus developing their national culture and creating really model Republics—i.e. in Stalin's words: Republics which carry out these aims honestly and conscientiously and form an example to the workers and peasants of neighbouring colonial and dependent countries to strive for their own liberation."

Rasulov also recalled that on December 4, 1935, at a conference of Kolkhoz men and women workers of Tadzhikistan and Turkmenia with Party and Government leaders, Stalin had said, " Friendship between the peoples of the U.S.S.R. is a great and most important achievement, for so long as this friendship exists the peoples of our country will be free and unconquerable. No one can frighten us—neither the internal nor the foreign foe—so long as this friendship remains a vital reality."

After pointing to the great role played by the Bolsheviks and by Stalin personally in strengthening mutual confidence and putting an end to the privileged position of one nation as against others, Rasulov stressed that it was this policy which enabled " the Tadzhikistan people to make such rapid progress from their former patriarchal-feudal order to a socialist order of society and thus step forward boldly upon the broad road leading to a Communist Society ".

On January 17, 1950, Uzbekistan celebrated the twenty-fifth anniversary of her establishment as a Soviet Socialist Republic.

In this connection Abdudyabbar Abdurakhmanov, Chairman of the Uzbek Council of Ministers, stated in the course of an interview:

" In a quarter of a century Uzbekistan has become a flourishing Socialist Republic, an equal among equals in the mighty Soviet Union.

" Under Tsarism, industry on the territory of what is now Uzbekistan was merely a small number of semi-handicraft enterprises mainly working up cotton. During the years of the Stalinist Five-Year Plans, hundreds of first-class industrial enterprises have been built in the Republic. The relative position of heavy industry in the total industrial output is 42 per cent.

" Today Uzbekistan gives the country coal, oil, steel, rolled iron, mineral fertilisers, cranes, excavators, metal-working lathes, diesel-engines, cotton-harvesting machines, mowers, sowing-machines, textile machinery, electric cables, building materials, textiles, consumer goods, foodstuffs and so on. The skilled workers and experts who man the factories equipped with the latest machinery are the Uzbeks themselves.

" The Soviet system helped the Uzbek people to eliminate not only economic, but also cultural backwardness. Before the Revolution not more than two or three per cent were literate, but today the entire country is literate.

" Uzbekistan now has its own Academy of Sciences and dozens of scientific research institutes of various kinds. It has numerous theatres, palaces of culture, museums and publishing houses; 120 newspapers are published in the Republic.

" Among the Uzbeks there are numerous doctors of science. The Uzbek people have talented writers, composers, artists and actors and actresses.

" Many-storeyed houses, electricity, a piped water supply, a sewerage system, parks of culture, asphalted squares and pavements are to be found in almost every town. Tashkent, the capital of the Republic, has become a beautiful garden city.

" The Uzbek people are meeting the 25th anniversary of their Republic with more achievements in the field of labour. The Republic's industry has fulfilled ahead of schedule the production plan for the fourth year of the post-war Stalin Five-Year Plan. In 1949 Uzbekistan gave the country more cotton than in 1941, when there was a record high yield. In celebrating the jubilee of their Republic, the Uzbek people turn their thoughts and express sentiments of boundless affection and warm gratitude first and foremost to the Republic's creator and the leader of all the peoples of the Soviet Motherland, to their beloved Comrade Stalin."

In the course of a letter to Stalin, the Jubilee session of the Uzbekistan Supreme Soviet also laid stress on the tremendous economic and cultural achievements of their Republic and the great service rendered to the Uzbek people by the Lenin–Stalin national policy and, turning to the position of women in the Republic, said:

> " One of the most outstanding achievements of Soviet power is the liberation of Uzbek women. Women of Soviet Uzbekistan

are taking an active part in the public and political life of the Republic, making a great contribution to the cause of all the nations of the U.S.S.R.—the building of Communism. Among the Deputies to the Supreme Soviet of the Uzbek S.S.R. are hundreds of women. Over 13,000 women are Deputies to the Regional, District, Town and Rural Soviets. The Uzbek people will be for ever grateful to you, dear Comrade Stalin, for helping us to eliminate the former economic and cultural backwardness, and helping us to become one of the progressive and cultured peoples of the Socialist epoch."

The latter proudly stressed the great help rendered by Uzbekistan in the second World War, then, turning to the post-war years, the letter declared:

"Our industry is advancing with great strides. During the past four years alone, 142 new industrial enterprises have gone into production. The struggle for the increase of labour productivity and the cutting of production costs, for an improvement in the utilisation of equipment, for the mobilisation of internal resources, has become an established law in the work of our industrial enterprises.

"Cotton-growing and all other spheres of agriculture are steadily going forward.

"In 1949 Uzbekistan's cotton-growers supplied the country with more cotton than in 1948. They successfully fulfilled the plan for grain deliveries to the State, as well as the plan for astrakhan, garden fruit, vegetables and many other kinds of produce.

"The front of the cultural revolution is developing and drawing in ever wider sections of the mass of the people. New works are enriching our literature and art. Looking back with pride on the road we have travelled and celebrating historic victories, on the occasion of the Republic's jubilee in all spheres of Socialist construction, we clearly realise at the same time that we are faced with many new and great questions, that many and still greater tasks are confronting us.

"We remember your instructions on the need for making a sound assessment of successes achieved, for adopting an irreconcilable attitude towards all shortcomings in work, for always seeing the difficulties ahead and mobilising all one's strength to overcome them."

It may be pointed out here that in Uzbekistan, as in the other Republics of Central Asia and the U.S.S.R. generally, the fourth or Post-War Five-Year Plan, which officially ends December 31, 1950, is well on the way to completion.

In the report of the Statistical Administration of the Uzbek Soviet Socialist Republic for 1949, it is stated that:

> " The increased plan of gross output for 1949 was fulfilled by Uzbekistan industry by 101 per cent, production increasing 10 per cent as compared with 1948.
>
> " Even more striking are the figures for a number of important types of production as compared with 1948. The output of diesel engines increased more than threefold. The output of steel and superphosphates was almost doubled. Fifty per cent more coal was produced. There was nearly a 40 per cent increase in the output of rolled steel and textile machinery. There was a considerable increase in the output of silk textiles, knitted goods, furniture, butter, soap, tea, meat products, etc.
>
> " During 1949 a number of big power stations, new plants and irrigation works began to operate. There was an increase in the capacity of the engineering, cotton-ginning and dairy plants, as well as of enterprises producing building materials. Production of new cotton-harvesting and textile machinery has begun.
>
> " The trading network ended the year with an increase in excess of the plan. Compared with 1948 the population bought much more meat, fish, animal fats, sugar, confectionery and tea. There was a big increase in the sales of wireless sets, bicycles, motor-cycles and other manufactured goods in both towns and villages."

Finally on January 29, 1950, the Turkmenian Soviet Socialist Republic celebrated its twenty-fifth anniversary, and on this occasion a letter to Stalin was adopted after thorough discussion at general meetings of factory workers, members of Kolkhozy, workers of Sovkhozy and machine tractor stations, as well as of various educational institutions.

The letter stressed the great help afforded by the Russian and other peoples of the U.S.S.R., the Communist Party and by Stalin personally to the deliverance of Turkmenia from the oppression, poverty and ignorance to which her people had been subjected so long. " The Turkmenian people," said the latter, " will never forget that the

fraternal friendship of the Soviet peoples is one of the finest conquests of the Great October (November) Revolution—the unbreakable foundation and stronghold of the powerful Soviet Union."

The letter goes on to quote both Lenin and Stalin on the great significance of a proper solution of the national question, and gives the following extract from a speech by Stalin in 1921 at the 10th Congress of the Communist Party.

> " The essence of the national question in the R.S.F.S.R. consists in the imperative need to destroy the existing backwardness (economic, political and cultural) of some of the nationalities (within the R.S.F.S.R.) which they have inherited from the past and to make it possible for the backward nationalities to catch up to the level of those in Central Russia—politically, economically and culturally."

The letter stressed the progress made during the past twenty-five years, the growth of Stakhanovism [1] both among industrial workers and Kolkhozy members and, after pointing out that the oil industry had fulfilled its Post-War Five-Year Plan by November 1948, and the 1949 revised plan before the end of the year, continued:

> " The young Turkmenian working class which has grown up, been educated and strengthened during the years of the Stalinist Five-Year Plans, has been from the day of its birth a valiant detachment of active and conscious builders of communism for whom work has become a real matter of honour, of glory, of valour and heroism. The working class now occupying a leading role in Turkmenia has supplied from its ranks hundreds of organisers and managers of industrial enterprises, of whole branches of socialist economy and of Soviet Party and social workers.
>
> " In place of the miserable small-scale agriculture with semi-nomadic forms of livestock husbandry, with hundreds of thousands of labourers cruelly exploited by the beys, we now have a flourishing large-scale collective agriculture—Kolkhozy and

[1] Stakhanovites are workers who make a point of mastering modern technique and of thinking out ways and means of increasing productivity at their own bench, enterprise or branch of work, thus increasing their productivity often several times the customary norm of output. The name is derived from the young Donetz miner, Stakhanov, who in August 1935 initiated the movement when, by his skilful use of a pneumatic pick, and aided by two timber-men, he caused a sensation throughout the U.S.S.R. by hewing 102 tons of coal in his six-hour shift, instead of the customary seven tons.

> Sovkhozy—assured of a proper supply of modern machinery, fertilisers, etc., and of agronomic assistance—embracing free workers of socialist agriculture and livestock breeding. . . ."

The letter stressed the great strides made in culture, the huge circulation of books, journals and newspapers, the growth of their national art and theatre; it pledged the signatories to strive to make good the shortcomings and mistakes which they recognise have been committed in the Republic from time to time and declared:

> " The liquidation of the backwardness of the Turkmenian people liberated from their social and national oppression, their transformation into a Soviet Socialist nation, the successes attained in socialist construction in such a comparatively short historical period—all this is a vivid example of the historical victory of the Lenin–Stalin national policy which cannot but point out to the enslaved peoples of the East the road towards freedom from imperialist oppression."

Forced labour could never produce such widespread feelings of pride and loyalty to their regime. It is only because the peoples of these republics feel themselves to be free and equal citizens with all others in their country, because they feel that they themselves are the masters of their destiny, that their work in the fields, mines and factories is work for themselves, their families and the good of their own State, that they work with such enthusiasm, and that work in the U.S.S.R. is becoming more and more, in the words of the Turkmenian letter, " a matter of honour, of glory, of valour and heroism ".

INDEX

A

Abai (Kazakh Poet), 139, 145
Academy of Sciences of the U.S.S.R., 195; geological prospecting in Kazakhstan, 124; Kirghizian branch of, 160, 168, 218; Tadzhik branch of, 176, 186, 192, 195, 218; Turkmenian branch of, 212–13, 217–18, 221–2
Academy of Science of Kazakhstan, 134–43; of Uzbekistan, 238, 257–62
Afforestation, 106
Afghanistan, 16, 18, 19, 27, 47, 49, 77, 80, 91, 171, 174, 181–2, 192, 204, 207, 227
Agricultural machinery plant in Tashkent, 242; schools in Turkmenistan, 212
Agriculture in Kazakhstan, 130; in Kirghizia, 151, 155; in Tadzhikistan, 173, 182, 184; in Turkmenistan, 213–14; targets in Fourth Five-Year Plan, 115
Air service, 15; from Karaganda, 125; lines in Khuf valley, 192; medical, 144, 159, 189
Aktiubinsk, 101, 120–1, 127
Alexander the Great, 26, 49, 246
Alma-Ata, 17, 45, 111, 116–20, 133, 135, 137–8, 141, 143, 145–6; educational establishments in, 119; industry in, 118; population of, 118; reconstruction plans, 119–20
Alma-Atinka river hydro-electric stations, 120
Aluminium smelting in Tadzhikistan, 177
Amirs (Emirs), 16, 30, 82; feudal wars between, 63
Amu-Darya river, 26–7, 31–2, 36–7, 39, 40, 103 ff., 171, 181, 184, 204, 207 ff., 222 ff., 227, 231, 238–40, 246
Anglo-Afghan Treaty (1920), 19
Anglo-Russian Agreement (1907), 18
Anglo-Soviet trade negotiations, 79
Arabs, 27, 172; conquest of Central Asia by, 27, 31, 33
Arsenic deposits in Kirghizia, 156, 158; in Tadzhikistan, 177
Asbestos deposits in Tadzhikistan, 177
Ashkhabad, 17, 47, 62, 75, 197, 204, 206–7, 212–13, 215, 217, 220–2; earthquake in, 221; factories in, 215, 220; planting trees in, 106
Ashradi (Tadzhik composer), 186
Astrakhan sheep, 100
Auckland, Lord, 47
Azerbaidjan, 82, 198

B

Bactria (now Balkh), 26, 27, 29, 39, 48
Balkhash, 128
Ballet in Kirghizia, 162
Barley growing in Kirghizia, 152; in Tadzhikistan, 182; in Uzbekistan, 234
Baryta in Kazakhstan, 137
Basmachi, 80–1, 86, 91
Bed-Pak Dala desert, 131–2
Bismuth deposits in Tadzhikistan, 177; in Uzbekistan, 242
Bolshevik Government, 75; Party, 69; policy, 92–3; thesis on Colonial Peoples, 70.
Boom Gorge, 158
Britain, 18, 75, 174
British educational work in India, 53; Government, 15, 17, 19, 20, 46, 174; representatives, 49; sphere of influence, 47
British Press, 18 ff.
Buddhism, 33
Bukhara, 15 ff., 23, 26 ff., 39, 42, 44, 46 ff., 52, 59 ff., 65, 74 ff., 80–1, 84 ff., 93, 174–5, 204, 206, 227; Emir of, 46, 54–5, 59, 77–8, 172; establishment of Soviet Socialist Republic of, 88; museum, 250; nationalities in, 87; new, 69; on road to socialism, 86; " peace Treaty " with, 46
Burnes, Sir Alexander, 47

C

Canals in Tadzhikistan, 180; in Turkmenistan, 205, 208, 210; in Uzbekistan, 230 ff., 240
Cattle breeding, 100, 105, 122, 131; in Kirghizia, 153, 155; grazing land in Uzbekistan, 227; in Tadzhikistan, 183, 200; raising in Turkmenistan, 205, 214
Caviare from Turkmenistan, 214
Champagne from Kirghizia, 155
Chemical combines, 101; industry in Kazakhstan, 123; plants in Turkmenistan, 214–15; works near Aktiubinsk, 127; works near Lake Balkhash, 128
China, 16, 23, 44–5, 117, 192, 194
Cinemas in Kazakhstan, 143, 145; in Kirghizia, 166; in Stalinabad, 187; in Tadzhikistan, 188; in Turkmenistan, 216; in Uzbekistan, 265
Cinema studios in Turkmenistan, 221
Coal deposits in Karaganda, 109; in Kazakhstan, 137; in Tadzhikistan, 174, 177, 179, 200; in Turkmenistan, 207; in Uzbekistan, 227, 240, 242, 245; increased output in Karaganda, 124; industry in Kirghizia, 156, 158; mines in Karaganda, 101; mining in Central Asia, 62; output in Kazakhstan, 123, 127; output in Uzbekistan, 246
Collective farms, 91–2; in Kazakhstan, 122, 130 ff.; in Kirghizia, 152, 154, 157, 163, 166; in Gorno-Badakhshan, 189–90; in Tadzhikistan, 179, 182, 184, 196; in Turkmenistan, 208–9, 213, 217, 220, 223; in Uzbekistan, 223, 228, 231–2, 234, 252
The Coming Struggle for India, 18, 43, 47, 54

Communist attitude to natives, 83, experiments, 25; Party, 82, 85, 91, 113, 189, 194; policy, 83, 84
Conservatory of Kazakhstan, 146
Copper deposits, 137; foundry in Karaganda, 101; mills in Kazakhstan, 128; refineries at Lake Balkhash, 124, 127, 129; refinery at Dzhezkazgan, 128, 135
Corundium and emery in Tadzhikistan, 177
Cotton, 22 ff., 42, 44, 58, 62, 81, 86, 91–2, 97, 99, 103, 114, 129–30, 132–3, 142; and silk yarns and fabrics in Tadzhikistan, 179; -cleaning factories in Tadzhikistan, 180; growing in Vakhsh Valley, 197, 199; in Kirghizia, 153; in Turkmenistan, 205, 208–9, 213, 215, 223; in Uzbekistan, 228–31, 234, 239; materials, output of, in Kazakhstan, 128; mills in Uzbekistan, 241; plantations in Central Asia, 103, 105; in Kazakhstan, 131–2; in Tadzhikistan, 172, 181; and fabrics of natural colour in Uzbekistan, 230
Cotton-seed oil plants in Tadzhikistan, 179
Crimean War, 17, 49
Culture in Kazakhstan, 134; in Kirghizia, 160; in Tadzhikistan, 173, 186–7, 201; in Turkestan (1923), 87; in Turkmenistan, 206; in Uzbekistan, 253

D

Dairy-farming, 105
Denikin, General, 75
Desert lands in Kazakhstan, 97, 121, 142; in Turkmenistan, 97, 210; in Uzbekistan, 97, 238
Distilleries in Kazakhstan, 130
Doctors in Central Asia, 114; in Kazakhstan, 134, 144; in Kirghizia, 166
Dunsterville, Major-General, 75
Dzhalal-Abad region, 151
Dzhambul (Poet), 139–140

E

Education in Central Asia, 112–13; in Gorno-Badakhshan, 192; in Kazakhstan, 134; in Kirghizia, 159–60; in Stalinabad, 185–6; in Tadzhikistan, 176, 188, 201; in Turkmenistan, 216; in Uzbekistan, 253–8
Ekibas-Tuz ore deposits, 126
Electric power in Kazakhshan, 123, 133; in Kirghizia, 156–7; in Tadzhikistan, 171, 189, 200; in Turkmenistan, 210; in Uzebekistan, 237, 239–40
Electricity for Kolkhozy (collective farms), 104–5, 133; output in Kazakhstan, 127–8; output in Uzbekistan, 237
Emba oilfields, 124, 127
Encyclopædia Britannica, 21, 24–5, 112
Enver Pasha, 79
Etherton, Lieut.-Colonel P. T., 16, 75, 77–9

F

Factories transferred from Moscow, 86
Factory crèche in Uzbekistan, 241–2
Fedchenko Glacier, 171
Ferghana, 17, 22, 27, 30, 75, 174, 193, 196, 227; canal, 102, 196, 230; labour organisation in, 68; risings in, 63; territory, 49, 52
Fisheries on shore of Caspian Sea, 215
Five Year Plans in Turkmenistan, 214; Plans in Uzbekistan, 236, 246, 278; Plan—first (1928–32), 104, 108–9, 113, 117, 122–3, 130, 179, 228; second, 109, 113, 122–3, 130, 179, 228, 230; third, 123, 179; fourth (1946–50), 104, 114–15, 125, 199; for Kazakhstan, 146–8; for Kirghizia, 168–70; for Tadzhikistan, 180, 187, 199–203, 277; for Turkmenistan, 222, 224–5, 282–3; for Uzbekistan, 271–3, 279 ff.
Flour mills in Kazakhstan, 130
Fluor-spar in Tadzhikistan, 177
Food enterprises in Kazakhstan, 123, 130; enterprises in Turkmenistan, 214; canneries in Kirghizia, 155; in Tadzhikistan, 179
" Forced labour," 274 ff.
Forest belts, 210
Fruit growing in Kirghizia, 154; in Uzbekistan, 234–5
Frunze, 17, 116, 152, 157–8, 163, 166, 197; educational institutes in, 167; factories in, 156, 167; meat-plant, 155; population of, 167; reconstruction plans, 168; region, 151

G

Gasworks in Uzbekistan, 245
Genghiz Khan, 29, 48, 51, 122, 172, 209, 246
Goat breeding in Kirghizia, 155; in Tadzhikistan, 183
Gold in Kirghizia, 156, 158; in Tadzhikistan, 177, 179
Golodny Steppe (Hungry Steppe), 121, 132, 142, 223, 231, 238, 258
Gooshkhon Pass, 178
Gorno-Badakhshan Autonomous Region of Tadzhikistan, 171, 175, 179, 189–92
Gosplan (1928–29), 108, 113
Great Chu Canal, 103, 151, 167; dam, 151
Greek influence, 27

H

Health services in Kazakhstan, 143–4; in Kirghizia, 166; in Tadzhikistan, 186, 188, 189; in Turkmenistan, 206, 218
Hemp growing in Kirghizia, 152
History of the Civil War in the U.S.S.R., 67–8, 73
Horses in Kirghizia, 149, 153, 155; in Tadzhikistan, 183; in Turkmenistan, 213
Hospital beds, 114, 144; Targets in Fourth Five Year plan, 115

I

Imperialism, 52, 61, 71
India, 17, 18, 27, 33, 44, 46 ff., 53–4, 57, 61, 174–5, 204; German invasion prevented, 18; frontier tribes of, 18
Industrial progress in Central Asia, 109; in Tashkent, 243; in Turkmenistan, 214, 216; in Uzbekistan, 246; output in Tadzhikistan, 179–80; workers in Kazakhstan increase, 130; workers in Kirghizia increase, 156
Industry in Central Asian Republics, 108; in Kirghizia, 156; in Tadzhikistan, 200; in Turkmenistan, 109, 206, 219; in Uzbekistan, 109, 242; output in Kazakhstan, 123; planned increases in Fourth Five-Year Plan, 114–15
Iron deposits in Karaganda, 126; in Kazakhstan, 138; in Uzbekistan, 240
Iron and steel works in Kazakhstan, 124, 128
Irrigation canals in Uzbekistan, 230–1; in Tadzhikistan, 171, 173, 180–1, 190–1; in Kirghizia, 151; in Turkmenistan, 205, 207, 209 ff.; in Uzbekistan, 238–40; joint operation of canals, 103; schemes, 101, 102, 141–2; systems in Central Asia, 104; system in Kazakhstan, 132; system in Khwarizm, 35
Issyk-Kul, 151, 157–9, 167

K

Kabul, 18, 19, 48, 77, 80
Karaganda, 125, 133; Basin, 124; coalfield, 124; educational and health institutions in, 125; mines in, 124; railways in, 125
Kara-Kalpak Autonomous Republic, 31, 204, 210, 227, 236, 245
Kara-Kum desert, 23, 31, 39–40, 50, 98, 106, 121, 142, 197, 204, 207, 209 ff., 215, 218, 220 ff., 238; canal, 104–5, 209; industrial enterprises in, 213; sulphur works, 101
Katta-Kurgan, 46; reservoir, 231
Kazakhstan, 17, 30, 32, 57, 91, 97, 103, 112, 114, 116–49, 227; canal in, 103; conquest of, 44; established as Union Republic, 93; establishment of autonomous republic of, 90; exports from, 42; gross output of industry, 109; land reform in, 81; rail link with Siberia, 111; rising in, 64
Kemal Pasha, 80
Kerensky, 66–7, 77
Khiva, 17, 30, 42 ff., 50, 52, 54, 55, 61–2, 74 ff., 93, 204, 215, 227
Khorezm, 77, 81, 85, 197, 209, 227, 245; establishment of Soviet Socialist Republic of, 88; nationalities in, 87
Khorog, 179, 189, 191; Hydro-Electric Project, 191; national theatre in, 192
Khuf valley, 192–3
Khwarizm, 31 ff., 38 ff.
Kirghizia, 17, 65, 91, 103, 114, 121, 149–71, 227; canal in, 103; climate of, 154; established as Union Republic, 93; establishment of autonomous republic of, 90; gross output of industry, 109; land reform in, 81
Kitchener, Lord, 175
Kolkhozy, *see* Collective Farms
Koltchak, General, 75–6
Kounrad copper mines, 128
Krasnovodsk, 206, 209 ff., 215, 219
Kum river, 194
Kzyl-Kum desert, 31, 40, 61, 98, 121, 207, 222–3, 227; plains, 240

L

Labour unions in Bukhara, 86
Land Reform, 81
Lazurite, 107
Lead works in Chimkent, 127, 177; in Kirghizia, 156, 158; in Tadzhikistan, 177, 200
Leagues of Mohammedan Working People, 68
Leather goods in Tadzhikistan, 179
Lenin, V. I., 73, 92
Light industries in Turkmenistan, 214
Literacy, 112–13; in Kazakhstan, 134; in Tadzhikistan, 113, 176; in Turkmenistan, 206, 217; in Uzbekistan, 279
Livestock breeding in Kazakhstan, 122, 130, 141; farms in Kazakhstan, 133; farms in liberated areas, help to, 220; in Kirghizia, 154; in Turkmenistan, 213; in Uzbekistan, 236
Lysenko, T. D., 154

M

Machine tractor stations in Kazakhstan, 130; in Kirghizia, 154; in Tadzhikistan, 184; in Turkmenistan, 208; in Uzbekistan, 228
Magnitogorsk iron and steel combine, 124
Mandel, William (*The Soviet Far East and Central Asia*), 55, 58, 65, 81, 84 ff., 92–3
Manganese in Kazakhstan. 138; in Uzbekistan, 242
Marble, 107; in Kazakhstan, 123
Marxism and the National and Colonial Question (J. Stalin), 71, 74, 82 ff.
Maximenko (agronomist), 213
Mensheviks, 67, 69, 74–5
Mercury in Kazakhstan, 137; in Kirghizia, 156; in Uzbekistan, 245
Merv, 17, 27 ff., 39, 49, 62, 75, 204, 206, 209; capture of, 48; factories in, 215
Metal industry in Kazakhstan, 123
Mica in Tadzhikistan, 177
Michurin, I. V., 154
Mikhailov, N., 57, 61, 88, 97, 99 ff., 121
Mineral wealth, 22, 101, 107, 109, 114; at Dzhezkazgan, 135; of Kazakhstan, 123, 137; in Kirghizia, 150, 155; of Tadzhikistan, 176–7; of Turkmenistan, 207
Minstrels in Kirghizia, 163

Molotov, V. M., 92
Molybdenum in Kirghizia, 156; in Tadzhikistan, 177
Mongol invasion, 29, 34, 40
Motor roads in Kirghizia, 157; roads in Tadzhikistan, 178–9, 201; roads in Turkmenistan, 221
Murghab (River), 207 ff.

N

Nationalisation of land, 91
Naurzum preserve, 143
Newspapers, 114; in Kazakhstan, 160; in Kirghizia, 160; in Tadzhikistan, 176, 187, 189; in Uzbekistan, 263
Nickel in Uzbekistan, 242
Nomads, 26, 28, 93, 97, 117, 122, 127; Kazakh, 93, 128, 139; Kirghiz, 93, 106, 152–3, 156; Turkmenian, 205–6; union of tribes, 27
Non-ferrous metals in Kazakhstan, 123–4; in Tadzhikistan, 179

O

Oil, 62, 109; -cracking plants in Turkmenistan, 214; in Kirghizia, 156; in Tadzhikistan, 174, 177, 179; in Turkmenistan, 207, 214–15; in Uzbekistan, 227, 240, 242; output in Kazakhstan, 123–4, 128; output in Uzbekistan, 245
Optical crystals in Tadzhikistan, 177
Orto-Tokai reservoir, 103, 151
Osh, 151

P

Palmerston, Lord, 17
Pamirs, 107, 171, 174 ff., 181 ff., 186, 188, 189 ff., 239; pass, 178
Pandj, 171, 174, 192–3
Peasant unions, 82; in Bukhara, 86
People's bards in Kirghizia, 162
Peter the Great (1682–1725), 43
Philharmonic Orchestra of Kazakhstan, 146; of Tadzhikistan, 187; in Turkmenistan, 221
Phosphates, 112
Phosphorite deposits, 123, 127, 137
Platonov (*History of Russia*), 43, 47
Polovtsoff, A. (*The Land of Timur*), 53–5, 59–60, 172–5, 177–8, 182–3
Potassium salts deposits in Kazakhstan, 123; in Tadzhikistan, 177; in Turkmenistan, 207; in Uzbekistan, 236, 240
Poultry farms in Kazakhstan, 133
Printing plants in Tadzhikistan, 179
Professional story-tellers, 54
Provisional Government, 65, 67 ff.

R

Radium in Tadzhikistan, 177
Railways in Central Asia, 111, 197; in Kirghizia, 112, 157 ff.; in Kazakhstan, 124, 127; in Tadzhikistan, 179; in Turkmenistan, 206, 222; in Uzbekistan, 236, 245; Minister of (I. V. Kovalev), 111–12; plan in post-war Five-Year Plan, 111
Red Army, 74, 76, 80; supplied by Kazakhstan, 124
Rice in South-East Kazakhstan, 129; in Turkmenistan, 223; in Uzbekistan, 234–5; plantations in Tadzhikistan, 181
Roosevelt, F. D., 98
Rubber-bearing plants in South-East Kazakhstan, 130; in Turkmenistan, 205
Rug-makers of Turkmenistan, 198, 206, 215
Russian Year Book (1914), 114

S

Sairam-Su Dam and Canal, 131
Salt deposits in Kirghizia, 158; in Turkmenistan, 207
Samarkand, 17, 22–3, 26 ff., 46, 62, 74, 77, 184, 206–7, 227, 246–52; Bolsheviks in, 69; labour organisation in, 68; risings in, 63; strikes in, 69
Schools (*see also under* Education), 85; attendance at, 113; in Kazakhstan, 134; in Tashkent, 244; in Uzbekistan, 253–4; shortage of, 87; targets in Fourth Five-Year Plan, 155
Seldzhuks, 28; fall of, 29
Shakespeare's "Othello" in Uzbekistan, 265; plays in Kazakhstan, 139; plays in Tadzhikistan, 188; "The Taming of the Shrew" in Kazakhstan, 145
Shaulder Dam, 131
Sheep-raising in Kazakhstan, 133; in Kirghizia, 149, 153, 155; in Tadzhikistan, 183; in Turkmenistan, 213–14; in Uzbekistan, 236
Shortandin Scientific Field Crops Station, 131
Shuro-Islamia, 67
Silk combine in Margelan (Uzbekistan), 245; factory in Samarkand, 251; industry of Tadzhikistan, 180; in Turkmenistan, 214; in Uzbekistan, 234
Sogdia, 26, 194–5
Soviet forces, 18, 76
Soviet Geography, 57, 62, 88, 97, 99 ff., 121
Soviet Government, 18, 19, 76, 81, 87, 106, 113
Soviet–Turkish Treaty (1921), 80
Sovkhozy, *see* State Farms
Stakhanov methods, 110, 282
Stalin, J. V., 68, 71, 73, 82 ff., 87 ff., 113, 211, 276 ff.
Stalinabad, 17, 179, 184, 189, 201; factories in, 185; Opera House, 186; population of, 185; Region, 175
Starch and molasses mills in Kazakhstan, 130
State farms; for karakul-breeding in Uzbekistan, 236; in Kazakhstan, 130, 132; in Kirghizia, 154; in Tadzhikistan, 182, 184; in Turkmenistan, 208, 213, 217–18
Sugar-beet cultivation in Kazakhstan, 110, 129–30; in Kirghizia, 110, 152;

in Uzbekistan, 110, 234; beet factories, 110; cane in Tadzhikistan, 182; factories in Uzbekistan, 111; industry, 109–10; industry Central Scientific Research Institute, 110; industry in Kazakhstan, 123; refineries in Kazakhstan, 130; in Kirghizia, 155
Sulphur deposits in Kirghizia, 158; in Tadzhikistan, 177; in Turkmenistan, 207, 215; in Uzbekistan, 227, 240, 242
Superphosphates factories in Kokand, 245
Syr-Darya river, 17, 21 ff., 26, 34, 43 ff., 52, 102, 121, 127, 227, 231, 238–9; dam, 132; reservoirs of, 103, 142

T

Tadzhikistan, 17, 91, 103, 114, 149, 171–203, 227; admitted as Constituent Republic of U.S.S.R., 91, 175; establishment of Soviet Socialist Autonomous Republic, 88, 175; gross output of industry, 109
Tashkent, 17, 23, 45–6, 52, 60, 66, 74, 81, 184, 206–7, 226–7, 242–4; Bolsheviks in, 69, 75; canal, 230; climate of, 21; cotton-selection station, 228; labour organisation in, 68; Soviets in, 66, 70; state university students, 197–8; strikes in, 69
Taxation under Arabs, 28
Tedzhen district, 209; oasis, 48, 204; river, 207
Textile industry of Tadzhikistan, 180; of Turkmenistan, 214; mills in Kazakhstan, 130; output in Uzbekistan, 246
Theatres; for children in Kazakhstan, 145; in Kazakhstan, 143, 145; in Kirghizia, 161–3; in Tadzhikistan, 187–8; in Turkmenistan, 216, 221; in Uzbekistan, 265
The Times, 20
Tien Shan mountains, 149, 157–8, 166, 171, 181, 186, 227; region, 151
Timur i Leng (Tamerlane), 29, 48, 51, 209, 246 ff.
Tin in Kirghizia, 156
Tobacco factories in Kazakhstan, 130; in Kirghizia, 152; in South-East Kazakhstan, 129; in Turkmenistan, 214
Tolstov, S. N., 31 ff.
" Tomasho " in Tadzhikistan, 196–8
Total area of the five republics, 21
Tsitsin, 154
Trade Unions, 82
Trans-Kazakhstan Railway, 124
Tsarist conquest, 16, 42, 47, 48, 54, 149; forces, 17, 18, 43, 49, 206; Government, 18, 22, 42, 44 ff., 59, 61, 63, 65, 68, 82, 102, 112, 158, 174, 205; rule, 52, 63, 64, 206; Russian industry, 107
Tungsten in Kirghizia, 156, 158; in Tadzhikistan, 200
Turkestan, 15, 17, 27, 45, 56, 60, 64, 69–70, 74–5, 81–2, 86, 90, 150, 227; agriculture in, 22; mineral wealth, 22; industry and trade, 23; population of, 25; taxes, 56; conquest of, 42; Government-General of, 46, 52; Committee, 67–8; autonomous government in, 74; civil war in, 74; " white " forces in, 76; British intervention in, 75–7; British agents in, 80; West, climate of, 21
Turkestan–Siberian (Turksib) railway, 111–12, 117, 223
Turkmenistan (Turkmenia), 17, 31, 62, 89, 91, 114, 204–25, 227; establishment of Soviet Socialist Republic of, 88
Turkomans, 47, 48, 50, 51, 54, 61, 87, 88, 204

U

Uleme, 67
Ulug-Bek, 30, 246–7, 253
Union of Soviet Socialist Republics, founding of (1922), 85
University in Kazakhstan, 134, 139, 143; in Samarkand (Uzbek State University), 257; in Tadzhikistan, 176, 186, 192; in Tashkent (Central Asian University), 256
Uranium in Kazakhstan, 137; in Tadzhikistan, 177
Ust-Urt Plateau, 236
Uzbekistan, 17, 31, 89, 91, 103, 114, 121, 149, 171, 175, 198, 204, 226–73; establishment of Soviet Socialist Republics, 88; rising in, 64; shifting sands, 106; State Public Library, 263–4

V

Vakhsh Canal, 180; River, 181; Valley, 197
Vambéry, Arminius, 15, 17, 42, 46–7, 49, 50, 53
Vanadium in Kazakhstan, 137
Veil, the (*Purdah*), 60, 160, 173, 206, 233, 243–4

W

Wallace, Henry A. (*Soviet Asia Mission*), 125–6
Water-power in Tadzhikistan, 179
Wheat; " Akmolinka," 131; drought resisting, 131; in Kirghizia, 151–2; in Tadzhikistan, 182; in South-east Kazakhstan, 129; in Turkmenistan, 223; in Uzbekistan, 234; winter, 131
White Guards, 67, 74, 76, 79; armies, 75; in Turkestan, 76, 150
Woollen cloth output in Kazakhstan, 128

Y

Yak breeding in Kirghizia, 155
Yakut (Arab geographer), 38 ff.
" Young Bukharans," 77
Yudenitch, General, 75

Z

Zeravshan river, 227, 231, 240; valley, 231, 239
Zinc in Tadzhikistan, 177, 200